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THE WILSON BULLETIN

AN ILLUSTRATED QUARTERLY MAGAZINE DEVOTED
TO THE STUDY OF BIRDS IN THE FIELD

Edited by **LYNDS JONES**

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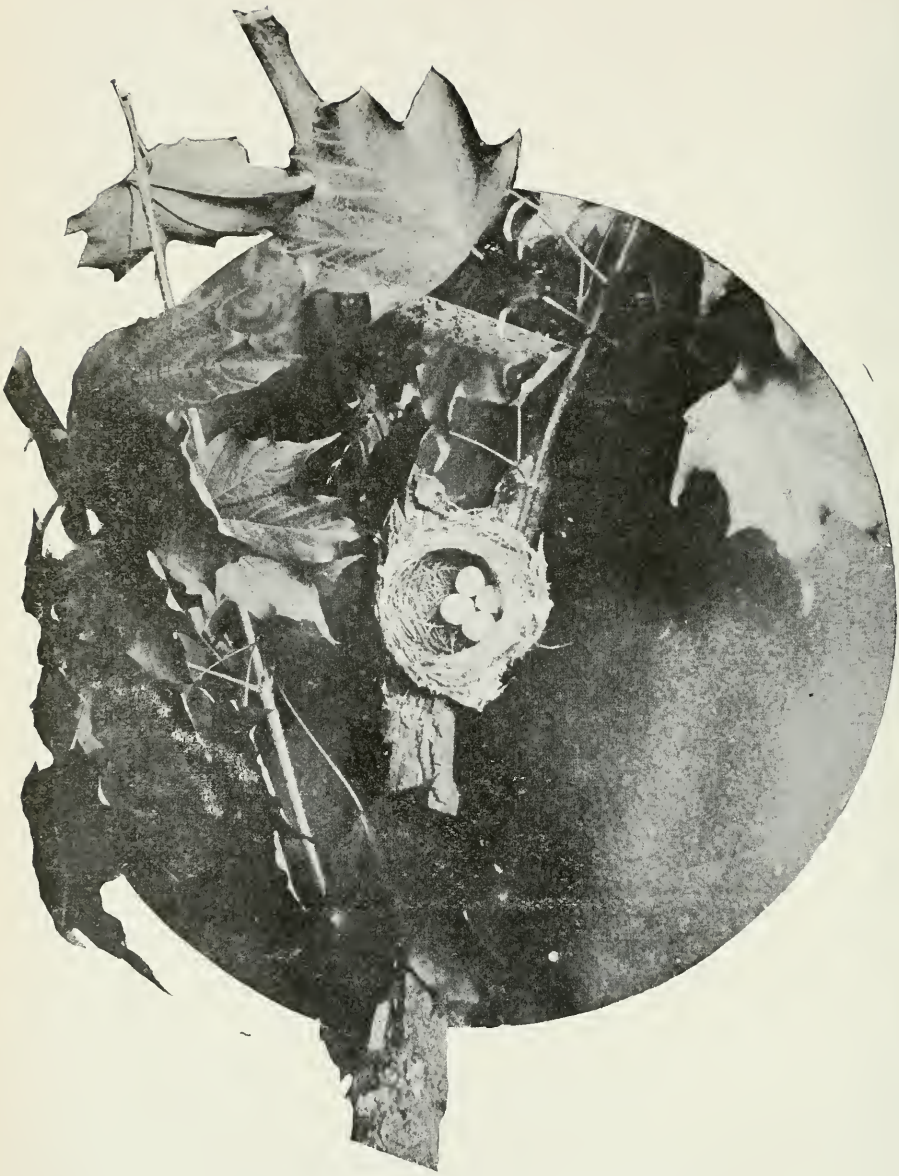

TYPICAL NEST OF CERULEAN WARBLER

Courtesy of Dawson's Birds of Ohio

Photo by Lynds Jones

THE

WILSON BULLETIN

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THE CERULEAN WARBLER (Dendroica rara).

LYNDS JONES.

It is only recently that this warbler's nests have been found anything like commonly. Indeed, until recently its eggs have been sold at a high price and its nests much prized. The accompanying illustration of a nest found the past season near Oberlin gives nearly the typical nest and its position on the branch.

About Oberlin this warbler is found in the deeper woods, preferably where there is considerable moisture, at least during the spring months. Swampy woods are not much in favor. The trees must be small and slender, with few or no branches within twenty feet of the ground. Among these high branches the male feeds and sings, during the brooding days making regular rounds to and from the nest. One may locate the tree in which the nest is hidden by patiently watching the male on his rounds, for the nest tree marks a halt in his otherwise somewhat regular progress of search for food. It is also the focus for all of the different excursions in different directions.

The nests which I have actually found have been in trees which grow near, but not in, a shallow, sluggish woods spring stream. Spring freshets have removed enough earth to make a depression, but not enough to make a ditch. The tree has not been one of several forming a thicket of branches, but rather one which stands somewhat by itself. The nests have invariably been placed upon branches at some distance from the bole of the tree, on the top of a more or less horizontal fork of the branch. I have never seen a nest built into a per-

pendicular crotch, after the manner of the Yellow Warbler, nor distinctly saddled into the crotch like the Wood Pewee.

The male has never shown much concern about the nest, but the female makes some feeble demonstration if the nest is closely approached. I have never seen the evidence of distraction exhibited by so many birds when their nests are threatened. A sharp, metallic chip, and restless flitting within two rods of the nest is the extent of the female's demonstration.

The eggs are decidedly warbler-like in every respect, but with a tendency to grayness in the markings. However, a word description of the eggs of many of the warblers is worthless; it is sufficiently difficult to distinguish between the eggs when one has them in hand.

It seems strange that the eggs and nests of this warbler have been so long rarities in collections when the birds are certainly not rare breeders in almost any part of Ohio where conditions are at all favorable. No doubt the height at which the nests are placed is the main cause for the scarcity.

A PARTIAL LIST OF THE SUMMER BIRDS OF HOLDERNESS, NEW HAMPSHIRE.

BY ARTHUR C. COMEY.

The town of Holderness lies on the west shore of Squam Lake (or Lake Asquam), in almost the geographical center of the state of New Hampshire. It is divided naturally by the Squam Range and Little Squam Lake into three sections. I made the following observations in the area between the ridge of the Squam Range (elevation 2100 ft.) and Squam Lake (elevation 510 ft.), with my headquarters at Camp Algonquin, on the shore of the lake. Notes were taken during the months of July and August, 1899, 1900, 1901, and 1903, but chiefly in the latter season, which also included the last five days of June and the first four days of September.

The shores of the lake are for the most part quite low, but rocky, with occasional narrow sand-beaches, and are covered with rather young woods of mixed growth, with here and there a grove of pine or hemlock. Nearly all of the farm-houses are situated on the "old road," which in most places is about a half-mile from the lake. Between these and the new road, not far from the shore, there are overgrown pastures and maple groves, with open fields near the houses. Back from the old road are mountain pastures and birch woods, stretching up to the almost bare top of Squam Range, about a mile away. Most of the marsh-birds were seen at Bennett's Creek, which meanders through a meadow into Bennett's Cove. Several years ago the dam at the outlet of Squam Lake was raised so that the lower end of this little plain was inundated and a little lagoon was formed, with a sand-beach along the shore. According to Mr. Faxon, in the introduction to his Holderness list (The Auk, Vol. V., p. 149), the locality lies "near the border of the Alleghanian and Canadian Avifaunæ, although decidedly Alleghanian in its general character."

The list includes six species recorded as migrants only, and eighty-seven summer residents. The sixty-five species recorded by Mr. Faxon (June 4–12, 1885, and June 4–11, 1886) are starred.

* 1. Gavia imber. Loon. Rather common, chiefly in the northern part of the lake.

2. Aix sponsa. Wood Duck. Rare. One record, a female at Hoag Island, July 18, 1903.

3. Botaurus lentiginosus. Bittern. Local: found at Bennett's Creek only.

4. Ardea herodias. Great Blue Heron. Rare; recorded as a migrant only. One record, one at Camp Algonquin, August 23, 1903.

5. Butorides virescens. Green Heron. Local: found at Bennett's Creek only.

6. Nycticorax nycticorax nævius. Black-crowned Night Heron. Locally rather common.

7. Helodromas solitarius. Solitary Sandpiper. Uncommon migrant. In 1903, a pair at Bennett's Creek, August 9 and 10.

*8. Actitis macularia. Spotted Sandpiper. Common.

*9. Bonasa umbellus. Ruffed Grouse. Quite common, but rare in 1903, owing to the cold spring, which killed nearly all the young.

10. Accipiter cooperii. Cooper's Hawk. Rare migrant. One record two on Squam Ridge, August 24, 1903.

*11. Buteo borealis. Red-tailed Hawk. Rare; recorded as a migrant only. One record, one on Rattlesnake Mountains, August 28, 1903.

12. Buteo lineatus Red-shouldered Hawk. Uncommon.

*13. Haliæetus leucocephalus. Bald Eagle. Rare. In 1903, found about Rattlesnake Cove only.

14. Falco sparverius. Sparrow Hawk. Rare. Two records in 1903.

15. Coccyzus americanus. Yellow-billed Cuckoo. Uncommon.

*16. Coccyzus erythrophthalmus. Black-billed Cuckoo. Rather common.

*17. Ceryle alcyon. Belted Kingfisher. Common.

*18. Dryobates villosus. Hairy Woodpecker. Not common.

19. Dryobates pubescens medianus. Downy Woodpecker. Common.

20. Sphyrapicus varius. Yellow-bellied Sapsucker. Uncommon. Not found below 1000 ft. elevation.

*21. Ceophlœus pileatus abieticola. Northern Pileated Woodpecker. Rare. Two records in 1900.

*22. Colaptes auratus luteus. Northern Flicker. Rather common.

*23. Antrostomus vociferus. Whip-poor-will. Quite common.

*24. Chordeiles virginianus. Nighthawk. Rather common. On August 28, 1903, at 11 A. M., I saw a flock of 100 or more between the two summits of Rattlesnake Mountains, circling about and slowly moving southward, very close to the ground.

*25. Chætura pelagica. Chimney Swift. Very common, but not seen the last two or three weeks.

26. Trochilus colubris. Ruby-throated Hummingbird. Uncommon.

*27. Tyrannus tyrannus. Kingbird. Abundant.

*28. Myiarchus crinitus. Crested Flycatcher. Rather common.

*29. Sayornis phœbe. Phœbe. Very common.

30. **Nuttallornis borealis.** Olive-sided Flycatcher. Rare migrant. One record, two at Camp Algonquin, August 26, 1903.

*31. **Contopus virens.** Wood Pewee. Abundant.

*32. **Empidonax minimus.** Least Flycatcher. Quite common.

*33. **Cyanocitta cristata.** Blue Jay. Quite common.

*34. **Corvus americanus.** American Crow. Common.

*35. **Dolichonyx oryzivorus.** Bobolink. Rather common summer resident. Quite common in August.

36 **Molothrus ater.** Cowbird. Rare; recorded in 1900 only.

*37. **Agelaius phœniceus.** Red-winged Blackbird. Rather common.

*38. **Icterus galbula.** Baltimore Oriole. Rather common. In 1903, last seen August 13.

39. **Quiscalus quiscula æneus.** Bronzed Grackle. Locally common.

*40. **Carpodacus purpureus.** Purple Finch. Rather common summer resident. Common in August.

*41. **Astragalinus tristis.** American Goldfinch. Abundant.

*42. **Poœcetes gramineus.** Vesper Sparrow. Common.

*43. **Passerculus sandwichensis savanna.** Savanna Sparrow. Local; common at Bennett's Creek.

*44. **Zonotrichia albicollis.** White-throated Sparrow. Uncommon; found on the Squam Range (elevation 2000 ft.). Also one singing bird, not 100 ft. above the lake, July 30, 1903.

*45. **Spizella socialis.** Chipping Sparrow. Common.

*46. **Spizella pusilla.** Field Sparrow, Abundant.

*47. **Junco hyemalis.** Junco. Common above 1000 ft. elevation. Not found below 700 ft.

*48. **Melospiza cinerea melodia.** Song Sparrow. Common, especially along the shores of the lake.

*49. **Melospiza georgiana.** Swamp Sparrow. Local. Probably regular at Rattlesnake Cove, where a singing bird was found, July 17, 1903.

*50. **Pipilo erythrophthalmus.** Towhee. Common in second growth woods, but not in overgrown pastures.

*51. **Zamelodia ludoviciana.** Rose-breasted Grosbeak. Uncommon summer resident. Common in August.

*52. **Cyanospiza cyanea.** Indigo Bunting. Abundant.

*53. **Piranga erythromelas.** Scarlet Tanager. Common.

*54. **Progne subis.** Purple Martin. Uncommon.

*55. **Petrochelidon lunifrons.** Cliff Swallow. Uncommon. In 1903, last seen August 12.

*56. **Hirundo erythrogaster.** Barn Swallow. Abundant.

*57. **Iridoprocne bicolor.** Tree Swallow. Common the first three weeks of July.

58. **Riparia riparia.** Bank Swallow. Rather common. Not seen after July 20.

*59. **Ampelis cedrorum.** Cedar Waxwing. Abundant.

*60. **Vireo olivaceus.** Red-eyed Vireo. Abundant. One nest had two young birds about five days old, August 1, 1903.

*61. **Vireo gilvus.** Warbling Vireo. Rare; recorded in 1900 only.

62. Vireo flavifrons. Yellow-throated Vireo. Rare.
63. Vireo solitarius. Blue-headed or Solitary Vireo. Uncommon.
*64. Mniotilta varia. Black and White Warbler. Uncommon.
*65. Helminthophila rubricapilla. Nashville Warbler. Uncommon.
*66. Compsothlypis americana usneæ. Northern Parula Warbler. Local; Common at Hoag Island, July 18, 1903.
*67. Dendroica æstiva. Yellow Warbler. Uncommon.
*68. Dendroica cærulescens. Black-throated Blue Warbler. Rare.
69 Dendroica coronata. Myrtle Warbler. In July, one recorded at 700 ft elevation. Common at Hoag Island on July 18, 1903. In 1903, after August 6, a very common migrant.
70. Dendroica maculosa. Magnolia Warbler. Uncommon migrant. First seen, August 12, 1903.
*71. Dendroica pensylvanica. Chestnut-sided Warbler. Quite common.
72. Dendroica striata. Black-poll Warbler. Rare: recorded in 1900 only.
*73. Dendroica blackburniæ. Blackburnian Warbler. Rare summer resident. In 1903, after August 6, a rather common migrant.
*74. Dendroica virens. Black-throated Green Warbler. Quite common.
75. Dendroica vigorsii. Pine Warbler. Common in all red pine groves.
*76. Seiurus aurocapillus. Oven-bird. Common.
*77. Seiurus noveboracensis. Water-Thrush. Rare. In July, one record, one at Hoag Island, July 18, 1903. In 1903, the only migrant was seen at Camp Algonquin, August 9.
*78. Geothlypis trichas brachidactyla. Northern Yellow-throat. Common.
*79. Wilsonia canadensis. Canadian Warbler. Rare migrant. On record, one at Camp Algonquin, August 23, 1903.
*80. Setophaga ruticilla. American Redstart. Abundant.
*81. Galeoscoptes carolinensis. Catbird. Common.
*82. Taxostoma rufum. Brown Thrasher. Common.
83. Troglodytes aedon. House Wren. Rather common.
84. Certhia familiaris americana. Brown Creeper. Uncommon on the Squam Range. Not found below 1500 ft.
85. Sitta carolinensis. White-breasted Nuthatch. Rather common.
86. Sitta canadensis. Red-breasted Nuthatch. Rather common summer resident. In August, common migrant in the flocks of Warblers
*87. Parus atricapillus. Chickadee. Abundant.
88. Regulus satrapa. Golden-crowned Kinglet. Rather common above 1500 ft. elevation. Not found below 700 ft.
89. Regulus calendula. Ruby-crowned Kinglet. Rare. One record, one on Squam Range (elevation 1800 ft.), July 15, 1903.
*90. Hylocichla fuscescens. Wilson's Thrush or Veery. Abundant, but became uncommon towards the end of August.
*91. Hylocichla guttata pallasii. Hermit Thrush. Common.

*92. Merula migratoria. Robin. Quite common. Rather common on the bare top of Squam Range.

*93. Sialia sialis. Bluebird. Common.

94. Passer domesticus. English Sparrow. A few around some of the farm houses.

THE LARKS OF GERMANY.

W. F. HENNINGER.

Characteristic of the Larks is the bill, longer than that of the finches and buntings, longer and broader wings, and the earth-colored plumage, commonly called "lark gray." Only three species are ordinarily found in Germany, the others being little more than mere stragglers. Largest of these is the Crested or Tufted Lark, easily recognized by its conspicuous crest, then the far-famed Skylark, well known to all, and the smallest, the Woodlark, distinguished from the others by its size and the white wing-bands or spots.

A little home-body is the Tufted Lark. The dusty roadside, fence-posts, deserted wagons and ploughs, stone walls, and roofs are her home, where we can listen to her low, but not uninteresting song, or see her skipping through the air with lisping notes or running to and fro with raised hood, as she snatches up an insect or a grain. Having entered Germany but lately, she has become familiar in many a region. She loves the slopes of the mountains, the grain-fields, and is more common in sandy places than her cousins. There she makes her nest on the ground in the fields, meadows and gardens; four to six eggs it holds, white or cream-colored, with gray and brownish spots. Both parents brood and take care of the young in turn, looking for their food. Even winter's chills do not drive them away. They run ahead of us in the streets with Yellowhammers and Sparrows, or visit our back yards and barns to look for offal, dungheaps, spilled grain and similar tid-bits, being very tame and modest, easily contented at all times, liked by young and old for their confidence in man, till spring comes and the humble creature is forgotten for her more brilliantly singing relatives.

In golden splendor the morning sun appears on the eastern horizon, still tinted with the rosy hue of early dawn, like mil-

lions of liquid diamonds the dew is sparkling in the fragrant grass of the meadows, and from the leafy arches overhead the morning concert of our friends is sounding forth in honor of their Maker's praise. Look! From yonder field of grain, in ever-widening spirals, higher and higher rises a plain-colored bird, floating on the balmy breeze of the bright spring morn. The little throat is swelled with exuberant joy and the sweetest warbling reaches our ear, now loud and clear, as the spiral nears us, now soft and distant as it turns the other way. How insignificant is the song of our Horned Lark in comparison with this music of the Skylark! With delightful ecstasy we follow it with our eyes till it soars as a mere speck in the azure sky, and now is lost to our sight. From every field and meadow they seem to rise, in glorious blending their notes ring out till some bold Sparrow Hawk sweeps past us and buries his cruel talons in the merry songster's breast, slowly dragging it to some secluded spot for lunch. For a few moments all is quiet, but soon they rise again on all sides. The Skylark's lyric nature accompanies its movements with the singing life of its soul. With its slow rising it creates the beautiful warbling trill, and in the invisible realms of the ether the flute-notes of its nature melt away in circling waves, whirling they descend earthward again, till, like a dart of Cupid, it swoops into the surging sea of grain. There she seeks her food—humble fare—grain, insects and worms. There she builds her excuse of a nest—a mere hollow, lined with rootlets. There she watches her four or five white, brown-speckled treasures, there she raises her broods in safety from the haunts of man, but not always of the reaper's scythe.

But come again with me to the meadows, when the twilight falls and the sun has gone to sleep. Softer now the tints of heaven, hushed the voices of the joyous spring, murmuring lowly are the forests' trees, slowly homeward turneth man and beast. Far, far away the Lark's melodious voice is heard; but no! there she sits behind a clod in the furrow near by. More like that insolent ruffian, the Sparrow, she seems in her plain garb, and I understand your look of disappointment. But 'tis often so; in plain garb is hidden many a jewel. And as she runs over the clods and through the grain with heaving breast, graceful neck, alert and free, you wilt soon see. 'tis

not the Lord of ruffians, but a star of heaven come down to earth. Now she stops! Sweetly, tenderly falls the song upon thine ear. It speaks to thee of by-gone days, of love's first dream, of childhood's play, of monher's tender care, of the old home by the wayside, of the brook's clear flowing waters, of all that is dear and sweet to memory and heart. The German nation's "Gemuet" is in the song. A yearning and a longing for yonder world comes over the soul as the dream-like love notes call 'till the last sound vanishes in the solemn darkness of the night. And Shakespeare called the Lark "shrillgorg'd"! Had the great poet no ear for music? Or is it because there is such a brutal shrillness in all British efforts of philanthropy and civilization from the time of Richard Coeur de Lion down to the days of Lord-butcher Kitchener in the Transvaal, that e'en the Lark to them was "shrillgorg'd"? For once, immortal Briton, thou wert mistaken! 'Tis not a "shrillgorg'd" monster, but nature's best, its own harmonious melody that reaches us in the Lark's divine lullaby and lets us feel the poet's truth:

"And I so ravished with her heavenly note
I stood entranced and had no room for thought."

Did you ever wander homeward through the woods, when the dark-winged angel of the night has kissed the fields and hamlets and breathed down to the roots of everything that lives? Come with me then, where the bushy beeches whisper softly, where the gloomy firs stand out in silent awe, broken here and there by the ghost-like drooping branches of the birch, whose bark reflects the moonlight's silvery rays,

"Als waere dran in stiller Nacht
Das Mondlicht blieben hangen."

where the blooming heath's carpet, in shining red and white, sends out its delicious odor. Only the distant croaking of the frogs in the treacherous shimmer of the marsh, the howling "boohoo" of the Horned Owl, that robber-knight of the winged world, the spinning of the Goatsucker is heard,—all else is quiet in the moor and heath. The Robins sleep in safety, the Mavis and the Skylark have ceased their song, the Nightingale's bosquets and man's abode are far away, only the elfs dance over the meadows' fog, inviting you to join

their merry throng, and erlking's will-'o-the wisp lures you into unknown depths. Hurriedly we pass along the barren fallow waste, close by the sombre forest. But lo! Up from the sterile barren goes a song, clear, bright and cheery. Is it a new spirit form that wants to mock us? Everywhere it seems to carry peace and comfort by its virile master-melody—a lovely greeting to the weary, wandering man! High up into the air they soar, those earnest, flute-like notes. Forgotten are the hobgoblins of the night, sweet thoughts of rest and joy enter thy heart, trust to God is poured into thy soul! Yes, praised be thou, O woodlark, thou living voice of mountain-heath and solitude! Though not crowned with the Nightingale's laurels, not made immortal by the poet's strain, to me thou art dearer in thy modesty. Not only in the dazzling light of day thou cheerest us, the dwellers on the earth, but in the night, "which is no mortal's friend," thou bringest with thy heavenly flute a welcome to the lonely pilgrim!

'Tis a song simpler than the Skylark's, but still more pleasing to the ear, a true ring of the forest's rustling leaves. It is a slow verse of some ten to twelve deep flute-notes, followed in a few seconds by a higher trill. Each spiral of its flight brings out a new verse, clear, powerful and melodious, full of masculine strength and not so much of feminine sentimentality as the Skylark's song. And even in the fall good singers let their voices be heard, though softer then and more subdued. Her flight is not so wide, more swerving than the Skylark's, and on the ground she is more modest in her agile movements than the latter. Twice a year she makes her pretty, well-built home on the ground in the heath or by the elder-bushes, to hold her five white, gray-speckled eggs. Carefully running on the ground for quite a distance, she brings the food to her loudly clamoring young. One of the latest birds to leave us in the fall, she is one of spring's earliest messengers, with her heavenly song, though snow may still cover the heath and forest, and we rejoice to have her with us again.

THE MARSH WRENS' MIDNIGHT SONG.

CHRESWELL. J. HUNT.

The Pensauken Creek forms a part of the boundary line between Burlington and Camden Counties, New Jersey. It twists and turns in a very irregular course, and at last finds its way into the Delaware River.

As with all these tide-water creeks, the banks are high and wooded on one side, while on the other side, for the most part, lie low stretches of alder swamps, covered in the late autumn with a rank growth of wild rice, spatter-dock and pickerel-weed, with here and there a clump of rose-mallow or a gorgeous cardinal flower.

It is here, among this almost impregnable growth, that countless numbers of Long-billed Marsh Wrens find a congenial home, building their globular nests in the alder bushes just above the water, and when within the swamp one is never beyond hearing of their rippling song.

They seem to be fairly overflowing with music—a bubbling, gushing song that seems rather to have had its birth above some rushing mountain stream, than above these sluggish waters. Before one has stopped singing another takes up the strain, hence all day long these marshes are merry with music, nor does the coming of night silence them.

On the moonlight nights of July and August, these happy little songsters make merry the midnight hours with their cheery warble.

They mount into the air, singing, and then dive back again among the sheltering reeds. The song is no doubt the same as that sung in the daylight, but the night gives to it a certain charm. One must hear it, mingled with the quivering call of a Screech Owl and the "quauk, quauk" of Night Herons, to fully appreciate it.

These concerts are not restricted to moonlight nights. I spent the night of August 8, 1903, in a boat among these swamps. It was cloudy, and now and then a light shower fell, but the Wrens were in song. Could they be otherwise? To the bird lover who has never witnessed this night performance, there awaits a very pleasant experience indeed.

DOUBLE NEST OF RED-EYED VIREO

Courtesy of Dawson's Birds of Ohio

Photo by Lynds Jones

A DOUBLE NEST OF RED-EYED VIREO.

LYNDS JONES.

The accompanying illustration represents a nest of the Red-eyed Vireo, taken more than a dozen years ago at my old home in Iowa. As shown in the illustration, there were two eggs in one side and one in the other. When the nest was found the mother bird was sitting upon the two egg side, but there were evidences showing that she had also sat upon the one egg side. To all appearances the two nests are exactly alike, and each is practically complete, only a small amount of the material being common to both nests. It could rarely happen that a main branch would have two twigs growing from it on opposite sides at almost the same level, and at practically the same angle. It is hardly conceivable that two females or two pairs of birds could have built these nests. At any rate, there was no evidence of it, for only one pair of birds was to be found in the vicinity. Neither is it likely that the male built one nest while the female built the other. The evidence is strongly in favor of the same architect for both nests. It looks like a case of indecision between two equally favorable nesting sites. We are not surprised at evidences of indecision in the Long-billed Marsh Wren—if that is indecision rather than a method of working off superfluous energy—but the Vireos have not been supposed to do such things.

THE CLOCK FACTORY.

ESTHER CRAIGMILE.

Our little party was eager with expectancy, for it stood on the edge of a pine grove from which proceeded no small commotion. It was eleven o'clock in the morning and the colony was just retiring for the day. We were nearer now, and could see they were Black-crowned Night Herons (*Nycticorax nycticorax nævius*). Some parent birds sat silently at the top of the dead pines, while some were feeding the young. The larger trees contained three and four nests. Three or

four eager heads were outstretched from these nests, while some were making awkward attempts at walking on the naked pine branches. There were hundreds of nests in an area of about two acres.

The young kept up a constant ticking, fast and slow, high and low, while an occasional *squawk* was heard from one of the old birds. It was a typical clock factory, where the *squawk* played the part of the cuckoo clock, and the young ticked off the seconds. They seemed little disturbed by our party of six walking below them. It was little wonder that the flock had killed the beautiful pine grove, when the ground underneath was carpeted with twigs. The whitewashed undergrowth was developing ruggedly in spite of the environment. Pieces of pale blue shell, dead fish and one dead bird, half grown, were found below the nests. Barring all sensations of the olfactory tract, it was a delightful experience.

THE NEW YEAR BIRD CENSUS.

This, our second annual bird census, shows an increase of near 50 per cent. in the number of reports sent in, and that in the face of more wintry weather and general difficulty in getting into the fields. The reports show that even under the most adverse conditions the birds are certain to be present in some numbers.

Vicinity of Alma, Lincoln County, Maine. Time 9:25 to 11:55 a. m. Weather fine, no wind. Temperature 6 to 22.

Redpoll, one flock of 30; Red-breasted Nuthatch, one flock of about 8; Chickadee, 7; Golden-crowned Kinglet, 2.

Total, 4 species about 47 individuals.

HAROLD E. PORTER, CHARLES H. ROGERS.

Bristol, Conn. Time 7:30 a. m. to 4:30 p. m. Weather, cloudy at first, clearing by 8:30 a. m., clear the rest of the day. Six inches of snow, powdered over by a light fall the day before.

Bob-white, 6, and fresh tracks; Ruffed Grouse, 4; Red-tailed Hawk, 1; Hairy Woodpecker, 4; Downy Woodpecker, 1; Blue Jay, 16; Crow, 205†; American Goldfinch, 250†; Tree Sparrow, 102†; Junco, 15; Song Sparrow, 1; Winter Wren, 1; White-breasted Nuthatch, 9; Chickadee, 14; Golden-crowned Kinglet, 3; Hermit Thrush, 1.

Total, 16 species, over 630 individuals.

ELBERT E. SMITH, FRANK BRUEN.

Boston, Mass., including the Parkway from Longwood through Jamaica Park and the Arnold Arboretum: also the Arnold estate and Hall's pond, Brookline. Time 8:50 a. m. to 1:15 p. m.

Bob-white, 15; Sparrow Hawk, 1; Barred Owl, 1; Flicker, 15; Blue Jay, 13; Crow, 19; Canadian Pine Grosbeak, 1; Goldfinch, 9; White-throated Sparrow, 10; Tree Sparrow 11; Junco, 1; Song Sparrow 6; Northern Shrike, 1; Brown Creeper, 2; White-breasted Nuthatch, 3; Chickadee, 23; Golden-crowned Kinglet, 8; Hermit Thrush, 1.

Moon Island and Squantum, Mass. Time 2:10 to 5:25 p. m.

Black-backed Gull, 2; Herring Gull, 600 (estimated); Red-legged Black Duck, 9; American Scaup Duck, 600 (estimated); American Golden-eye, 450 (estimated); Buffle-head, 6; Horned Lark, 10; Crow, 137; Meadowlark, 4; American Goldfinch, 60 (approximate); Snowflake, 22; Tree Sparrow, 6 (one singing); Song Sparrow, 8; Chickadee, 4.

Total, 27 species, 2059 individuals.

FRANCIS G. AND MAURICE C. BLAKE.

Cambridge, Mass., through the Fresh Pond Marshes, over Arlington Heights to Waverly: eight miles. Time 8:45 to 12:15. Clear, modate N. W. wind. Temperature 24 to 35. Five inches of snow on the ground.

Bob-white, 8: Red-shouldered Hawk, 1; Hairy Woodpecker, 1; Downy Woodpecker, 5; Northern Flicker, 1; Blue Jay, 2; Crow, 10; Red-winged Blackbird, 2; Canadian Pine Grosbeak, 2; Goldfinch, 2; Tree Sparrow, 30; Song Sparrow, 6; Swamp Sparrow, 4; Myrtle Warbler, 1; Brown Creeper, 5; White-breasted Nuthatch, 3; Chickadee, 15; Golden-crowned Kinglet, 10.

Total, 18 species, 108 individuals. ARTHUR C. COMEY.

Philadelphia, Pa. Time 3 to 5 p. m. Place, a cemetery two miles from the city hall. Weather, clear, ground with a little snow in some places.

Red-tailed Hawk, American Crow, 1; American Goldfinch, 2; Junco (estimated) 40; White-throated Sparrow, 6; Song Sparrow, 5; Cardinal, 1; Carolina Wren, 1; Winter Wren, 1; White-breasted Nuthatch, 2.

Total, 10 species, 60 individuals. LOUIS T. PARKE.

Cupola, Chester County, Pa. Time 11 a. m. to 4:20 p. m. Weather, clear, ground scantily covered with snow here and there. Wind, N.W. to N., brisk. Temperature 43 to 38. About 250 acres gone over thoroughly.

Downy Woodpecker, 4; Northern Flicker, 1; American Crow, several hundred; Tree Sparrow, 35; Junco, 60; Song Sparrow, 20; White-breasted Nuthatch, 3; Chickadee, 30; Tufted Titmouse, 1; Golden-crowned Kinglet, 1; Hermit Thrush, 1.

Total, 12 species, 157 individuals (excluding Crows).

CHRESWELL J. HUNT.

Central Park, New York, January 1, 1904. Time 10:15 a. m. to 12:45 p. m. and 3 to 4 p. m. Clear, wind slight. Temperature 38.

Herring Gull, 3; Hairy Woodpecker, 2; Downy Woodpecker, 2; Starling, (about) 30; European Goldfinch, 4; White-throated Sparrow, (about) 30; Junco, 1; Song Sparrow, 1; Cardinal, 4; Brown Creeper, 1

White-breasted Nuthatch, 2; Red-breasted Nuthatch, 1; Chickadee, (about) 10; Robin, 1.

Total, 14 specimens, 92 individuals.

CLINTON G. ABBOTT AND MAUNSELL S. CROSBY.

Leonia, Nordhoff, Teaneck and Englewood, N. J. Time 9:15 a. m. to 4:15 p. m. Weather, fine. Wind, light west. Ground snow-covered.

Herring Gull, about 200 (in Hudson River); Red-tailed Hawk, 5; Snowy Owl, 1; American Crow, 19; White-throated Sparrow, 7; Tree Sparrow, 93; Junco, 67; Song Sparrow, 23; Myrtle Warbler, 5; Brown Creeper, 1; White-breasted Nuthatch, 1; Chickadee, 18; Golden-crowned Kinglet, 3.

Total, 13 species, 443 individuals. GEORGE E. HIX.

Cadiz, O. Time 9:30 to 12-30 and 1:30 to 4:30. Clear until 1:30 p. m. Wind, N. W. to N. E. Temperature at starting, 24, at noon, 31, on return, 27. Distance walked, by pedometer, registered 14 miles. Five inches of snow.

Bob-white, 15; Ruffed Grouse, 1; Red-tailed Hawk, 1; Great Horned Owl, 1; Hairy Woodpecker, 3; Downy Woodpecker, 15; Red-bellied Woodpecker, 4; Northern Flicker, 1; Horned Lark and Prairie Horned Lark, 65; Blue Jay, 3; Tree Sparrow, 34; Junco, 22; Song Sparrow, 9; Cardinal, 16; Carolina Wren, 4; White-breasted Nuthatch, 17; Chickadee, 23; Tufted Titmouse, 25.

Total, 19 species, 259 individuals. HARRY B. MCCONNELL.

Jefferson, O. Time 8 to 11:30 a. m. and 1 to 4:30 p. m. Temperature, 25. Slight west wind or none; mostly cloudy. Snow 8 inches, drifts in some places.

Ruffed Grouse, 1; Red-tailed Hawk, 1; Barred Owl, 2; Hairy Woodpecker, 2; Downy Woodpecker, 8; Northern Pileated Woodpecker, 2; Red-bellied Woodpecker, 2; Northern Flicker, 1; Blue Jay, 8; Tree Sparrow, 2; Junco, 5; Carolina Wren, 1; White-breasted Nuthatch, 9; Red-breasted Nuthatch, 1; Tufted Titmouse, 2; Chickadee, 13; Golden-crowned Kinglet, 1.

Total, 17 species, 61 individuals. ROBT. J. SIMM.

McZena, O. Time 7:50 to 11:50 and 1 to 4:30. Partly cloudy, partly clear. Wind S. W., light in the morning, N., brisk in the afternoon. Temperature 14 to 32. Distance walked, about 8 miles. Alone in the morning, with Mr. Zeno Metcalf in the afternoon.

Bob-white, 15; Ruffed Grouse, 2, Mourning Dove, 40; Red-tailed Hawk, 3; Sparrow Hawk, 1; Belted Kingfisher, heard several times; Hairy Woodpecker, 1; Downy Woodpecker, 2; Red-headed Woopecker, 4; Red-bellied Woodpecker, 2; Northern Flicker, 1; Prairie Horned Lark, 30; Blue Jay, 16; American Goldfinch, 27; Tree Sparrow, 60; Junco, 40; Song Sparrow, 6; Cardinal, 6; Brown Creeper, heard; Carolina Wren, heard singing; White-breasted Nuthatch, 20; Chickadee, heard; Tufted Titmouse, 13; Golden-crowned Kinglet, 1; Bluebird, 6.

Total, 25 species, 300 individuals. C. L. METCALF.

McConnelsville, O. Time 8 to 12 a. m. Cloudy and snowing. Temperature, 26. Wind north. Two inches of snow. Distance traveled, two miles.

Red-tailed Hawk, 1; Hairy Woodpecker, 2; Downy Woodpecker, 12; Red-bellied Woodpecker, 8; Northern Flicker, 1; American Goldfinch, 1. Tree Sparrow, 5; Junco, 30; Song Sparrow, 4; Cardinal, 45; Carolina Wren, 9; White-breasted Nuthatch, 8; Tufted Titmouse, 13, Chickadee, 12.

Total 14 species, 151 individuals.

C. H. Morris and E. J. Arrick.

Oberlin, O. Temperature 24 to 28. Cloudy. Wind north, light to brisk. Oberlin and immediate vicinity.

Bob-white, 1; Sparrow Hawk, 1; Screech Owl, 1; Hairy Woodpecker, 5; Downy Woodpecker, 7; Northern Flicker, 5; Blue Jay, 7; Meadowlark, 6; American Goldfinch, 3; Tree Sparrow, 5; Junco, 60; Song Sparrow, 2; Cardinal, 4; White-breasted Nuthatch, common; Tufted Titmouse, 6; Chickadee, common; Bronzed Grackle, probable

Total, 16 species, over 60 individuals. Francis M. Root.

Oberlin, O. Weather as above. Trip of 22 miles to Lake Erie, at Oak Point, and west via Vermilion river and Chance Creek and the old quarry region.

Herring Gull, 1; Bob-white, 14; Mourning Dove, 1; Sharp-shinned Hawk, 1; Red-tailed Hawk, 1; Golden Eagle, 1; Long-eared Owl, 1; Barred Owl, 1; Screech Owl, 2; Hairy Woodpecker, 6; Downy Woodpecker, 12; Red-bellied Woodpecker, 4; Northern Flicker, 2; Blue Jay, 20; American Crow, 1; Goldfinch, 3; Vesper Sparrow, 1; Tree Sparrow, 61; Song Sparrow, 18; Junco, 39; Cardinal, 29; Northern Shrike, 1; Carolina Wren, 2; Brown Creeper, 1; White-breasted Nuthatch, 21; Chickadee, 19; Tufted Titmouse, 18; Golden-crowned Kinglet, 2.

Total, 28 species, 283 individuals.

Lynds Jones, D. E. Nye, F. B. Wolfe.

Belle Isle, Detroit River, Mich., January 1, 1904. Time 10 a. m. to 2 p. m. Four inches of snow on ground, a fine, mild day for this time of the year.

Cardinal, (male and female); Tufted Titmouse, 25; Chickadee, 50; White-breasted Nuthatch, 10; Red-breasted Nuthatch, 2; Brown Creeper, 4; Blue Jay, 1.

Total, 8 species, about 90 individuals.

This same day Norman A. Wood saw a Cardinal at Ann Arbor, Mich. Raymond E. Miller captured an American Bittern at Waterford, Mich., and J. Claire Wood saw a Northern Shirke at Wyandotte, Wayne County, Mich. Alexander W. Blaine, Jr.

Hinsdale, Ill. Time 8 a. m. to 1 p. m. Cloudy; north wind. Temperature 15. Two inches of snow, with drifts. A five-mile tramp through low prairie, east of town, and woods skirting east and north sides.

Hairy Woodpecker, 1; Horned Lark, 25; Blue Jay, common; American Crow, common; Evening Grosbeak, 20; Purple Finch, 15; Junco, 50; Brown Creeper, 3; White-breasted Nuthatch, 5; Chickadee, 25; Golden-crowned Kinglet, 4; Tree Sparrow, 100.

Total, 12 species, over 250 individuals. ESTHER A. CRAIGMILE.

Rock Island, Ill. Time 8:50 a. m. to 12:50 p. m. Mostly clear. Wind N. E , strong. Ground partly covered with snow. Temperature 22 to 24. A 12-mile tramp through woods and fields.

Bob-white, fresh tracks; Downy Woodpecker, 2; Red-headed Woodpecker, 2; Prairie Horned Lark, 8; Blue Jay, 15; American Crow, 4; Tree Sparrow, 30; Junco, 7; Brown Creeper, 1; White-breasted Nuthatch, 2; Chickadee, 14.

Total, 11 species, 85 individuals. BURTIS H. WILSON.

Mt. Carmel, Ill. Time 7:30 to 11 a. m. Distance traveled, about seven miles. Cloudy, threatening rain: light west wind; ground bare. Temperature 40.

Canada Goose, 18; Hawk (Coopers ?) 1; Red-tailed Hawk, 1: American Sparrow Hawk, 1; Hairy Woodpecker, 5: Downy Woodpecker, 4; Yellow-bellied Sapsucker, 2: Red-headed Woodpecker, 12. Red-bellied Woodpecker, 7; Flicker, 8; Blue Jay, about 20: Crow, about 25; Meadowlark, 16; Goldfinch, about 30; Tree Sparrow, about 50; Junco, about 100; Song Sparrow, 6; Cardinal, 15; Loggerhead Shrike, 1; Carolina Wren, 3; Bewick's Wren, 1; Winter Wren, 1: Brown Creeper, 1; White-breasted Nuthatch, 4; Tufted Titmouse, about 50; Chickadee, about 20; Golden-crowned Kinglet, 4; Bluebird, 10.

Total, 28 species, about 416 individuals. CHAS. F. BRENNAN.

Washington, D. C., Dec. 30, 1903. Ground just covered with a light fall of snow which came during the preceding night. Sky clear. Sharp northwest wind blew during most of the day, making it difficult to catch the low notes of birds, but also tending to keep the birds bunched in the sheltered spots. Temperature not known, but just warm enough in middle of day to thaw the snow in the sunshine. Time spent in the fields, 9 a. m. to 11:30 a. m., along Piney Branch and Rock Creek, in in the northwestern outskirts of the city; 12 m. to 4:30 p. m., along the eastern branch of of Potomac, just east of the city.

Species given in the order in which first observed, and numbers of each species seen, accurately counted except in the following cases, where accurate count was impossible and numbers only estimated, namely: Junco, Crow, Turkey Vulture, White-throated Sparrow, Fish Crow, Tree Sparrow.

Junco, 40; American Crow, 1200; Song Sparrow, 11. White-breasted Nuthatch, 5: Cardinal, 14; Tufted Titmouse, 11; Downy Woodpecker, 2; Hairy Woodpecker, 1; Chickadee, 6; Winter Wren, 2: Yellow-bellied Sapsucker, 1; Turkey Vulture, 11; White-throated Sparrow, 18: Goldfinch, 4; Carolina Wren, 4; Red-breasted Nuthatch, 1; Hermit Thrush, 1; Cedarbird, 16; Fish Crow, a few among other Crows; Golden-crowned Kinglet, 1; Meadowlark, 2; Tree Sparrow, 20; Brown Creeper, 2; Duck, one of the larger wild ducks, but species not recognized; Sparrow Hawk, 1. THOS. H. LEVERING.

A DISASTROUS TRIP.

W. F. HENNINGER.

For several years it had been the desire of the writer to visit the famous Port Clinton (Ottawa County, O.) marshes to explore the bird world at the same place where Dr. Langdon had been so fortunate in 1880. The afternoon of June 1st found me at Port Clinton, in a terrible rain and wind storm. Early the next morning found me out on the Portage River exploring the marshes for miles, then in the afternoon out on the Lake Erie waters. June 3rd, and 4th, on which day I was joined by Rev. W. Leon Dawson of Columbus, found me on Sandusky Bay, on the grounds of the Portage Gun Club and the Wynous Point Shooting Club. It was the same scene everywhere. The storm had carried the water higher inland than for the last eighteen years, and everything had been flooded. The only birds that had escaped destruction of their nests were the Red-winged Blackbird and the Long-billed Marsh Wren. All our searching was in vain. Not a Grebe, not a Least Bittern were seen, but few Coots and Gallinules heard. On Friday, Brother Dawson ascended the dizzy height of the water works tower at Sandusky, but as far as the eye could see, the waters spread over the Sandusky marshes. Under these condition it was a wonder that any birds had escaped, and our record of sixty-six species noted during our three days' stay will still compare favorably with Langdon's ninety, as seen in 1880.

Of interest were only a troop of five Bonaparte Gulls and four Semi-palmated Sandpipers on June 3rd, several Black Terns and sixteen Turnstones, seen on June 4th on Sandusky Bay. The Turnstones were found on a newly planted cornfield, and it was a pretty sight to watch them turning over the clods and catching their prey. It was in the club house of the Wynous Point Shooting Club that we found the most interesting things, stored away in the collection of birds, and enabling Brother Dawson and myself to bring home at least a few noteworthy records from this disastrous trip.

The first was a specimen (sex unknown) of Chen hyperborea nivalis, shot in the fall of 1886.

2. Trumpeter Swan 1877 and White-fronted Goose, shot in the fall of 1868.

3. White-winged Scoter, shot in fall of 1881.

4. Peregrine Falcon, shot in fall of 1882, by Colonel E. A. Scoville.

5. A Hybrid, between Anas obscura and Anas boschas, killed in the fall of 1878, by Judge E. B. Sadler.

6. A pure Albino Redhead, killed in fall of 1880.

7. A partial Albino Coot, and

8. A partial Albino Wilson s Snipe, both killed in the fall of 1881, by C. J. Clark.

The Coot has many white feathers on the head and neck, also smaller white feathers on various parts of the body. The Wilson's Snipe has the upper part of both wings almost entirely white.

9. A Snowy Owl, shot in fall of 1881.

All of the Ohio Ducks were represented in this collection, among them the rare Gadwall in several specimens.

AN IMPROVIDENT KINGBIRD.

LYNDS JONES.

One of the Oberlin public school teachers has given me a Kingbird's nest which a pupil of hers found and preserved. The nest is normally made of strings, rags, weeds, hair, twigs and rootlets. It was built in an apple tree in no usual manner, except that the birds failed to notice that they had built into one side of the nest a fertile apple bud. In the natural course of growth the apple had to have room, and soon began to disarrange the side of the nest When completely grown the apple was fully two inches in diameter, and since the inside diameter of the nest is only a half-inch larger, there was little left of the nest cavity. No doubt the young had left the nest before the apple had attained much size, but probably not before it began to encroach upon the space intended for the young birds. I have heard of growing apples in bottles and other fanciful receptacles, but never heard of the use of a bird's nest before.

THE MAY HORIZON.

So much interest was shown in the May Horizon last year, and such good results grew out of it, that we are ready to undertake it again the coming May. If possible, it would be the best plan to spend several whole days with the birds during May; but if that is not possible, then plan to spend some one whole day with them, in the definite expectation of making your list for that day reach the hundred mark. Woods, fields, marshes, and bodies of water should be included in the field of operations if possible. It is always best to give the region as much study as possible the day previous to the day set for the supreme effort, so that you may be able to find the less common species with the least expenditure of time. You cannot hope for a very large list unless the study begins as soon as the morning light is strong enough to make large birds visible. I expect to get the owls during the morning twilight, and the Whipporwill during the evening twilight. If you must sleep, do it at high noon. You will need four lunches at least, and if you eat them while you watch for birds, you will be surprised at the number of new records that are made during the meal in the woods or beside the lake or pond. Lists sent to the editor not later than the 12th of May can be printed in the Bulletin.

A DOOR-YARD LIST OF BIRDS.

BY ROBERT L. BAIRD.

Many local lists are monthly published in our bird magazines. These are valuable and show the increased interest in bird study. Many of these lists are from favored localities and few are from such limited areas as one's own door-yard. It is with the purpose of showing some of the possibilities in this time that I contribute the following account from my notes and check-book for September and the first twenty days of October, 1902:

At this time my home was with Dr. Chas. Hancock, of Denmark, Lee County, Iowa. Dr. Hancock's place is situated at the southeast edge of town. With the exception of one house across the road, there is no other within a hundred and fifty yards. The lot is about a hundred and fifty yards long by sixty to seventy wide. About the house are six or seven evergreen trees, Norway Spruce, Cedar and Pine, several fruit trees and an Osage Orange tree. At the farther end of the lot is a row of Locust trees. Part of the place was devoted to a garden, but a large part was simply in grass.

Within these limits I saw or heard forty different species of birds in the seven weeks of the fall above mentioned. Not

the most favorable time of the year, by any means, for finding birds, yet I was surprised almost every day by some new visitor. I wish I might have kept a list for a whole year there. I would be willing to wager that in the course of twelve consecutive months, ninety or one hundred different species of birds could be seen or heard in this yard or flying over it. The list which I have, I am sure could have been made much larger, but my school duties kept me away from eight o'clock in the morning to four in the afternoon.

The best find of the period, for myself at least, was Bewick's Wren. He came on one of the last days of the period, a cool, cloudy day. I had a good look at him, for he did not seem to notice my presence much He was investigating everything around, especially through the large wood pile.

It was just a few rods down the road that I found three Leconte's Sparrows one week, but I found none right in the yard.

One wet, foggy morning, just before leaving for school, I happened to look out of the window to a cedar tree, a few feet from the house. It was fairly swarming with little birds and warblers. Among them were Kinglets, an Ovenbird, Black-throated Green Warblers, Yellow Warblers, a Myrtle Warbler, and two or three which I could not identify.

One evening just before twilight, I could hardly believe my ears when, from a little clump of bushes, came an occasional "chewink" of a retiring Towhee. I investigated more closely and watched for some time a female Towhe from a distance of only six feet.

Taking it all in all, I found the numbers of individuals in this region of southeastern Iowa far larger than here about Oberlin. My first of January all day horizon, published in the first Bulletin of 1903, was a good example of this fact. Especially was this true of the Larks, Blue Jays, Warblers and Sparrows.

Following is the complete list of birds found in the yard I have described:

Mourning Dove, few; Screech Owl, few; Hairy Woodpecker, few; Downy Woodpecker, few; Red headed Woodpecker, tolerably common; Red-bellied Woodpecker, few; Northern Flicker, tolerably common; Chimney Swift, common; Nighthawk, few; Crested Flycatcher, few; Wood Pewee, few; Prairie Horned Lark, 2; Blue Jay, common; American Crow, few; Meadowlark, tolerably common; Baltimore Oriole, few; Bronzed Grackle, common; English Sparrow, common; American Goldfinch, tolerably common; Whitethroated Sparrow, few; Field Sparrow, few; Slate-colored Junco, few; Towhee, 1; Barn Swallow, few; Warbling Viero, few; Yellow Warbler, few; Myrtle Varbler, 1; Chestnut-sided Warbler, 1; Black throated Green Warbler, 2; Oven-bird, 1; Catbird, few; Brown Thrasher, few; Bewick's Wren, 1; House Wren, few; Whitebreasted Nuthatch, few; Chickadee, tolerably common; Golden-crowned Kinglet, few; Ruby crowned Kinglet, few; American Robin, few; Bluebird, common, migrating.

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EDITORIAL.

Spring has begun when the first birds arrive from the south. We recognize in the appearance of the birds the beginning of new conditions of both weather and landscape. To the true ornithologist spring covers the time during which the birds are passing north, summer the time of nesting and molting, after the movement north has ceased and before the breeding birds have ceased to remain in hiding, autumn is the season of southward migration, and winter the remainder of the year. We are just now entering upon spring, with its predictions of coming birds and coming mild weather and have little difficulty in spurring ourselves to more effort in bird study. We do well when we pause to take stock of what we know and plan to accomplish the most in this delightful study with the time at our disposal. There are two things which will be of great service in this study. The first is: Plan your study to suit your own convenience. The second: faithfully keep a note-book record of what you see and learn. By the record I mean what you actually see and learn, not what you think about the birds and hope to learn. You are after facts first, after the facts it will be time to draw conclusions.

It is the purpose of this Bulletin and of the Club which it represents to help those who need help in their study of birds. The editor is always ready to answer questions through these pages, if the question is of general interest and application, or privately, if that seems the better course. Questions which would naturally lead to controversy cannot be given a place for the very obvious reason that our knowledge of the birds would not be increased thereby. We are learners direct from Nature.

Mr. Frank S. Daggett is now in Chicago, and will probably remain there for a year. Any of our members who may be in the city would meet a welcome from him at 241-2 Rialto Building.

Mr. Clarence F. Stone of Brockport, N. Y., has had remarkable success in quest of the nests of the Cerulean, Canadian, Black-throated Blue, and other rare warblers, and if he is blessed with the necessary leisure hours, we may hope for an illustrated article on the subject.

Mr. W. H. Brownson, who is news editor of the Portland, Maine, Daily Advertiser, writes a very attractive bird column once a week for that paper. In his long walks he sees and writes of many interesting species.

Mr. Harry B. McConnell, of Cadiz (Ohio) Republican, has occasional interesting and instructive articles about the birds, giving special attention to the reasons why we should do all in our power to protect them.

Mr. Walter F. Webb, now in the nursery business, is just as much of a bird enthusiastic as ever. He is planning to build a fine house with plenty of room for cabinets for his collections. He would be greatly pleased to meet any of our members who may find themselves in Rochester, New York.

Advance proof sheets of Gleanings From Nature No. III, The Haunts of the Golden-winged Warbler, by J. Warren Jacobs, give promise of another treat of this interesting series. The makeup is similar to the Martin Colony booklet. There will be three full page plates showing the haunts of the Golden-wing, three smaller plates with nests in natural position, and two on one page showing series of eggs, with parents, natural size. There will also be a color chart, and notes on migration, nest building, song, food, young, eggs, etc., thirty pages in all. Mr. Jacobs is a careful observer and knows how to record what he sees.

NOTES.

FROM BOULDER, COLORADO.

Our experience with House Finches (Carpodacus mexicanus frontalis) and Say Phoebes (Sayornis saya) may be of interest to your readers. Early in May a pair of the finches began building a nest of roots and mud in a 4x5 dry plate box placed under our front porch for their benefit. A few days later another pair began work on the same nest, which finally resulted in a pitched battle lasting for several hours, with brief intermissions. One pair then left and the other continued work. In a day or two a Phoebe put in an appearance and began work on the same nest, apparently working in harmony with the finches, for we never caught them in any altercation, though unquestionably both families worked on the nest. In two or three days the finches left Then the Phoebes built a fine symmetrical nest of hair and wool over the finches' rough foundation. In due time four Phoebe eggs appeared, then after three or four days incubation the Phoebes abandoned the nest, having apparently been kept from the eggs by visitors on the porch so long that the eggs got chilled. Nest and eggs are now in the Museum of the University of Colorado. JUNIUS HENDERSON.

HOPE, DICKINSON CO., KAS , January 25, 1904.

I am glad to note some new birds in this locality in the last two years. All first noticed in 1902 and again in 1903. The first was the Phoebe, three nests found in 1902 and twelve in 1903. Wood Thrush, three nests in 1902 and one in 1903, in park in town. Chimney Swift one pair nested in school house chimney in 1902 and three birds seen in spring of 1903, but did not nest as they only staid about a week and then left. The Phoebe was quite common last summer along the creeks, but only a few in 1902. I am sure they have not nested here before 1902, as I have been under the bridges where they nested every year since they were built, and never saw them or their nest until 1902. The Chimney Swifts are also the first pair ever noted in town; pointed them out to old eastern people and they said, "they were the first they ever had seen here but are quite common in eastern part of state" On January 5, 1904, as I was driving in the country I saw a Brown Thrasher hopping along a hedge fence, the first one of them I ever noticed in the winter here. O. H. PEASE.

PUBLICATIONS RECEIVED.

A Revision of the American Great Horned Owls. By Harry C. Oberholser. From the Proceedings of the United States National Museum, Vol. XXVII, pages 177-192. No. 1352.

A Review of the Wrens of the Genus Troglodytes. By Harry C. Oberholser. From the Proceedings of the U. S. National Museum, Vol. XXVII, pages 197-210. No. 1354.

In these two papers Mr. Oberholser has reviewed all American forms, not simply those which we call North American. We regard this broad-

ening of view which has been evident recently, a distinct gain in classification methods. It is certain to throw light upon many problems of distribution and relationship hitherto only suspected. The use of *Asio* instead of *Bubo* for the the genus of the Great Horned Owls will cause temporary confusion, but ultimately make for stability, we trust. Seventeen forms of the Great Horned Owl are recognized, six of which are new species. That does not seem excessive from the whole of the Americas, but we trust that the naming of forms may rest permanently here. In treating the wrens of the genus *Troglodytes*, Mr. Oberholser has made a new genus in which to place that curious form, *Thryorchilus browni* from Panama. Of the 37 forms of *Troglodytes* recognized there are 14 independent species showing no subspecific affinities. The South American form *musculus* is split into 14 forms, while our North American form *aedon*, remains triple. In the whole genus bnt three new subspecies are eloborated, none of which affect our fauna. We congratulate Mr. Oberholser upon this work, and trust that the whole field of American ornithology may be gone over as carefully in the near future. L. J.

The Birds of Licking County, Ohio. By I. A. Field. Reprinted from The Bulletin Scientific Laboratories of Denison University, Vol. XII, December, 1903.

Mr. Field prefaces the annotated part of his catalogue with remarks upon the topography of the county and the general distribution of the birds found there. The annotations consist of statements concerning the times of appearance of the birds and the regions in which they may be found. Of the 203 species found in the county during the three years of his study, 27 are permanent residents, 79 summer residents, 9 winter residents, 80 transient visitants, and 8 accidental visitants. Of the accidental species the most interesting are the European Widgeon and Cinnamon Teal, both captured on Licking Reservoir. We welcome this additional faunal l st as a contribution to the literature of distribution. L. J.

Boll Weevils and Birds. Address by Prof. H. P. Attwater, industrial agent Southern Pacific, at the Second Annual Convention of the Texas Cotton Growers' Association, Dallas, Texas, November 6th, 1903.

In this paper Prof. Attwater shows clearly that one of the greatest enemies of the Cotton Boll Weevil is the host of birds. He pleads for the protection and encouragement of the birds that they may go about their beneficent work of destruction of insect pests unhindered. It is not too much to expect that if the birds are allowed to increase as they would normally they will keep in check insect depredations, for they will eat such insects as are most easily secured, other things being equal. L. J.

Postglacial Origin and Migration of the Life of the Northeastern United States. By Charles C. Adams. Reprinted from

Journal of Geography, Vol. I, No. 7, September, 1902, pages 303-310, 352-357.

In this paper the author endeavors to trace the redistripution of Life in that part of North America which was covered with glacial ice. The first migration was by the arctic types, which pushed up against the border of the retreating ice; second by the subarctic life, following close upon the heels of the arctic, and the third the temperate, the last migration, represented by the forms now found in Ohio, Indiana and Illinois. Only the third class are typically American. The northward migrations were marked not by river courses so much as by forest and plains regions. We welcome this paper as throwing light upon the post-glacial origin of our flora and fauna. L. J.

Southeastern United States as a Center of Geographical Distribution of Flora and Fauna. By Charles C. Adams. Reprinted from Biological Bulletin, Vol. III, No. 3, July, 1902. Pages 116-131.

The author here shows that so far as the eastern United States is concerned, the post-glacial life has been distributed from the southeast, except the distinctly boreal forms, and still remains as a center of dispersal. He recognizes, also, a southwestern center of dispersal in the arid region of northern Mexico and the southwestern United States. LJ

Amateur Sportsman, Vol. XXX, Nos. 2, 3, 4.
American Ornithology, Vol. IV, Nos. 1, 2, 3.
Bird-Lore, Vol. VI, Nos. 1, 2.
Boll Weevels and Birds.
Cassinia, 1903.
Condor, The, Vol. IV, No. 1.
Journal of Applied Microscopy, Vol. VI, Nos. 9, 10.
Maine Sportsman, The, Vol. II, Nos. 125, 126.
Naturaliste Canadien, Le, Vol. XXX, Nos. 11, 12; Vol. XXXI, No. 1.
Nature Notes, Vol. XV, No. 170.

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ELECTION OF NEW MEMBERS.

The following persons are nominated for Active membership:

Objections to the reception of any of these persons should be sent to the Secretary before April 15.

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Maunsell S. Crosby, Rhinebeck, N. Y.

Nominated for Associate membership:

G. F. Richardson, 116 S. Main St., Mt. Pleasant, Mich.

A typical nest of the White-eyed Vireo (*Vireo noveboracensis*). One egg of the Cowbird appears above the lower edge of the nest.

(Courtesy of Dawson's Birds of Ohio)

THE

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SOME BIRDS OF OLYMPIA, WASHINGTON.

BY J. M. KECK.

Olympia is a favorite winter resort for many species of birds. The earth is rarely frozen, and both fresh and salt water is open all winter. The lowest temperature last winter was 25 degrees. There was but little snow, and at no time was the ground everywhere covered. Wild fruits abound and remain fresh until spring. In summer the birds are less abundant than in winter. The following list is the result of occasional observations from September 1 to May 5:

1. **Aechmophorus occidentalis.** Western Grebe. Common resident.
2. **Colymbus holbœlli.** Holbœll Grebe. Rare winter visitor.
3. **Colymbus auritus.** Horned Grebe. Migrant, common in spring.
4. **Colymbus nigricollis californicus.** Eared Grebe. Migrant. Seen in spring but not common.
5. **Podilymbus podiceps.** Pied-billed Grebe. Abundant resident. Very tame.
6. **Gavia imber.** Loon. Rare winter visitor.
7. **Gavia pacifica.** Pacific Loon. Rather common in winter.
8. **Gavia lumme.** Red-throated Loon. Common winter resident.
9. **Cerorhinca monocerata.** Rhinoceros Auklet. Rare winter visitor.
10. **Synthliborhamphus antiquus.** Ancient Murrlet, Very common winter resident.
11. **Cepphus columba.** Pigeon Guillemot. Resident, but not common.
12. **Larus glaucescens.** Glaucous-winged Gull. Abundant winter resident.
13. **Larus occidentalis.** Western Gull. Common resident.
14. **Larus argentatus.** Herring Gull. Abundant. Probably resident.
15. **Larus delawarensis.** Ring-billed Gull. Very common. Possibly resident.
16. **Larus brachyrhynchus.** Short-billed Gull. Not common winter resident.

17. **Larus philadelphia.** Bonaparte Gull. Abundant in winter. Possibly resident.

18. **Sterna paradisæa.** Arctic Tern. Common summer resident.

19. **Phalacrocorax pencillatus.** Brandt Cormorant. Common resident.

20. **Phalacrocorax pelagicus.** Pelagic Cormorant. Rare winter visitor.

21. **Merganser americanus.** American Merganser. Abundant in spring.

22. **Merganser serrator.** Red-breasted Merganser. Common in winter.

23. **Lophodytes cucullatus.** Hooded Merganser. Rather common resident.

24. **Anas boschas.** Mallard. Not common resident.

25. **Nettion carolinensis.** Green-winged Teal. Seen in spring. Rare.

26. **Spatula clypeata.** Shoveller. Rare resident.

27. **Aix sponsa.** Wood Duck. Rare resident.

28. **Aythya americana.** Redhead. Not common resident.

29. **Aythya vallisneria.** Canvas-back. Abundant in winter and tame.

30. **Aythya marila.** Scaup Duck. Not very common.

31. **Aythya affinis.** Lesser Scaup Duck. Abundant resident.

32. **Clangula clangula americana.** American Golden-eye. Abundant resident.

33. **Charitonetta albeola.** Buffle-head. Rather common resident.

34. **Harelda hyemalis.** Old-squaw. Rare winter visitor.

35. **Histrionicus histrionicus.** Harlequin Duck. A pair seen April 5.

36. **Oidemia deglandi.** White-winged Scoter. Common winter resident.

37. **Oidemia perspicillata.** Surf Scoter. Common winter resident. Tame.

38. **Chen hyperborea.** Lesser Snow Goose. Rare migrant.

39 **Anser albifrons gambeli.** White-fronted Goose. Not common migrant.

40. **Branta canadensis occidentalis.** White-cheeked Goose. Common migrant. As I have not had the opportunity of closely examining this goose, and as the books give several varieties of Canada geese for this region, I am not absolutely certain of this species. The hunters do not distinguish the different varieties of Canada geese. They report them nesting to some extent in this locality.

41. **Botaurus lentiginosus.** American Bittern. Summer resident.

42. **Ardea herodias.** Great Blue Heron. Resident. Rare in winter.

43. **Ardea virescens.** Green Heron. Not common summer resident.

44. **Nycticorax nycticorax nævius.** Black-crowned Night Heron. Summer resident.

45. **Fulica americana.** American Coot. Summer resident.

46. **Gallinago delicata.** Wilson Snipe. Summer resident. Returns in February.

47. **Ereunetes occidentalis.** Western Sandpiper. Migrant.

48. **Numenius longirostris.** Long-billed Curlew. Probably summer resident.

49. **Colinus virginianus.** Bob-white. Rare resident. Introduced.

50. Lophortyx californicus. California Partridge. Rare resident. Introduced.

51. Bonasa umbellus togata. Oregon Ruffed Grouse. Common resident.

52. Phasianus torquatus. Ring-necked Pheasant. Not common. Introduced.

53. Columba fasciata. Band-tailed Pigeon. Not common summer resident.

54. Accipiter velox. Sharp-shinned Hawk. Not very common resident.

55. Accipiter cooperii. Cooper Hawk. Rare resident.

56. Buteo borealis calurus. Western Red-tail. Not common resident.

57. Falco sparverius deserticola. Desert Sparrow Hawk. Rare resident.

58. Pandion haliaetus carolinensis. Am. Osprey. Summer resident.

59. Asio accipitrinus. Short-eared Owl. Common resident.

60. Megascops asio kennicottii. Kennicott Screech Owl. Common resident.

61. Bubo virginianus saturatus. Dusky Horned Owl. Not common resident.

62. Ceryle alcyon. Belted Kingfisher. Resident. Rare in mid-winter.

63. Dryobates villosus harrisii. Harris Woodpecker. Not common resident.

64. Dryobates pubescens gairdnerii. Gairdner Woodpecker. Not common resident.

65. Ceophlœus pileatus abieticola. Northern Pileated Woodpecker. Rather common resident.

66. Melanerpes torquatus. Lewis Woodpecker. Rare. Probably summer resident.

67. Colaptes cafer saturatior. Northwestern Flicker. Common resident. A variety of the Red-shafted type.

68. Chordeiles virginianus henryi. Western Nighthawk. Summer resident.

69. Selasphorus rufus. Rufous Hummingbird. Abundant summer resident.

70. Selasphorus alleni. Allen Hummingbird. Rare summer resident.

71. Cyanocitta stelleri. Steller Jay. Resident. Very rare in winter.

72. Perisoreus obscurus griseus. Gray Jay. Rare resident.

73. Corvus americanus. American Crow. Resident. Rare before Feb. 5.

74. Corvus caurinus. Northwest Crow. Abundant resident.

75. Agelaius phœniceus caurinus. Northwestern Red-wing. Common resident. Rare in mid-winter.

76. Sturnella magna neglecta. Western Meadowlark. Common resident.

77. Scolecophagus cyanocephalus. Brewer Blackbird. Abundant resident. Very tame.

78. Coccothraustes vespertinus montanus. Western Evening Grosbeak. Abundant migrant. A flock of a dozen appeared Feb. 18. In a few days the flock increased to a hundred. About April 1 the flock decreased to about twenty. A few are still here May 5. They are very tame. They feed mainly on maple seeds.

79. Carpodacus purpureus californicus. California Purple Finch. Abundant resident.

80. Acanthis linaria. Redpoll. Rather common winter resident.

81. Astragalinus tristis salicamans. Willow Goldfinch. Common resident. Rare in mid-winter.

82. Spinus pinus. Pine Siskin. Common resident.

83. Passer domesticus. English Sparrow. Resident. Not so abundant as in eastern cities.

84. Ammodramus sandwichensis alaudinus. Western Savanna Sparrow. Summer resident.

85. Zonotrichia leucophrys gambelli. Gambel Sparrow. Migrant. Possibly summer resident.

86. Zamelodia leucophrys nuttalli. Nuttall Sparrow. Common summer resident.

87. Zonotrichia coronata. Golden-crowned Sparrow. Migrant.

88. Spizella socialis arizonæ. Western Chipping Sparrow. Common summer resident.

89. Junco hyemalis oergonus. Oregon Junco. Common winter resident.

90. Melospiza melodia morphna. Rusty Song Sparrow. Common resident.

91. Passerella itiaca unalaschcensis. Townsend Sparrow. Winter resident.

92. Pipilo maculatus oregonus. Oregon Towhee. Common resident.

93. Piranga ludoviciana Louisiana Tanager. Rare summer resident.

94. Progne subis hesperia. Western Martin. Common summer resident.

95. Tachycineta thalassina lepida. Northern Violet-green Swallow. Common summer resident.

96. Riparia riparia. Bank Swallow. Common summer resident.

97. Ampelis cedrorum. Cedar Waxwing. Rare resident.

98. Helminthophila alata lutescens. Lutescent Warbler. Summer resident.

99. Dendroica æstiva. Yellow Warbler. Not common summer resident.

100. Dendroica coronata. Myrtle Warbler. Migrant.

101. Dendroica auduboni. Audubon Warbler. Common resident.

102. Dendroica nigrescens. Black-throated Gray Warbler. Rare summer resident.

103. Geothlypis tolmiei. Macgillivray Warbler. Rare summer resident.

104. Salpinctes obsoletus. Rock Wren. Very rare resident.

105. Thryomanes bewickii calophonus. Northwest Bewick Wren. Not uncommon resident.

106. Troglodytes aedon parkmanii. Pacific House Wren. Not common summer resident.

107. Olbiorchilus hiemalis pacificus. Western Winter Wren. Common resident.

108. Cistothorus palustris paludicola. Tule Wren. Rare summer resident.

109. Sitta canadensis. Red-breasted Nuthatch. Not common resident.

110. Parus atricapillus occidentalis. Oregon Chickadee. Common resident.

111. Psaltriparus minimus. Bush-Tit. Not common resident.

112. Regulus satrapa olivaceus. Western Golden-crowned Kinglet. Abundant winter resident.

113. Regulus calendula. Ruby-crowned Kinglet. Possibly partly resident. Common from Feb. 15 to May 1.

114. Hylocichla ustulata. Russet-backed Thrush. Rare summer resident.

115. Merula migratoria propinqua. Western Robin. Resident. Very rare in mid-winter. Abundant after Feb. 7.

116. Ixoreus nævius. Varied Thrush. Migrant. Common through March.

117. Sialia mexicana occidentalis. Western Bluebird. Resident. Very rare in mid-winter and not very common at any time.

ALL DAY WITH THE BIRDS.

Responses to the call for All Day studies of the birds during May show a gratifying interest in this intensive study of the migrations. It is not an easy task to spend an entire day, always on the keen edge, searching for birds, but no such effort goes unrewarded. One who has given much time to the study of the spring migrations hopes only to be able to spend more time during the next season. Constant study for three weeks or more, during which the birds are passing in the greatest numbers, might prove too wearing to even the most ardent student, but there are those of us who must learn by personal experience.

Reports received range from May 5 to May 23, and represent territory from New York City on the east to Rock Island, Ill., on the west, and latitude from Oberlin to Columbus, Ohio. The reports seem to prove that the height of the migrations for the region covered was between May 6 and 16, a

period of ten days. The Ohio and Illinois reports clearly indicate an exceptional abundance of birds, both in individuals and in species, for practically the whole period. At Oberlin the 21st was marked by a general departure of warblers and sparrows. But a discussion of the Northern Ohio migrations may be found elsewhere.

In the accompanying table, "A" indicates that the species was abundant, "C" that it was common, "T C" tolerably common, "F" few in numbers. "X" indicates that the species was recorded but the individuals not counted, and the numbers give the numbers of individuals seen when a count was made.

Explanations of the work done in the several places represented are given here together, so that the tabular arrangement may not be interfered with, and so that the reader may see at a glance the distribution so far as the reports give it. The Ohio reports are given precedence because they contain the largest number of species,

Oberlin, Ohio, May 9. Temperature 70 at 3 a. m., 54 at 9 a. m. Partly cloudy, clouding rapidly to a cold westerly rainstorm at 6:30 a. m., the rain ceasing in an hour, and afterward a gradual lightening of the clouds, with a brief show of the sun at 5 p. m. Wind westerly, heavy to strong. Time, 3 a. m. to 6:30 p. m. Oak Point and vicinity until 3:30 p. m., then a wheel ride twelve miles to Oberlin and two hours' work in the woods and fields northwest of Oberlin.

LYNDS JONES.

Tiffin, Ohio, May 10. Temperature (at Oberlin) 45 to 62. Wind west-south west, brisk. Showers 9:30 to 10 a. m., 1:30 to 2:30, 3:10 to 4:20 p. m. 4:30 to 10:15 a. m., fields, meadows and two woods one and one-half miles southeast of Tiffin; 11:15 a. m. to 1:30 p. m., due north of Tiffin along the Big Four tracks and a deserted reservoir, three miles; west one mile, 2:30 to 3:10 p. m.; north one mile and back along the Sandusky River, 4:30 to 5:20 p. m.; drive home across country, reaching home at 7:20 p. m.

REV. W. F. HENNINGER AND CARL HEILMANN.

Cadiz, Ohio, May 8. Temperature 60 to 70. Cloudy, with occasional light showers. Wind strong in the afternoon. Beginning at 4 a. m., time in field 11 hours. Walked fifteen miles, rode wheel fifteen miles. In woods and orchards around Cadiz.

HARRY B. MCCONNELL.

Columbus, Ohio, May 23. Temperature between 65 and 80. Clear and still in the forenoon, cloudy with light southwest wind afternoon. 3:00 a. m. to 9:30 p. m. Locality west of Columbus, and on the Ohio State University campus. Z. P. METCALF.

Morton Park, Illinois, May 8. Day warm and cloudy with slight showers. Wind southerly. 5 a. m. to 1 p. m. ORPHEUS M. SCHANTZ

Rock Island, Illinois, May 14. Morning overcoat, cold, warming about noon. No wind. 5 a. m. to 7 p. m. About twelve miles south of Rock Island, Ill., including a drive to Milan. A cultivated region, with woods, thickets, fields and streams. BURTIS H. WILSON.

A TWO-DAY CENSUS.

Northern New Jersey. 6:15 p. m. May 6th to 4:55 p. m. May 8th.

May 6th. Station to house by wagon; 6½ miles; 1½ hours; 6:15 to 7:45. Weather mostly cloudy. 10 species, all seen later.

May 7th. Weather cloudy. 12 species heard from room before leaving it, all seen later.

5.05 a. m. to 8:05 a. m. Weather partly cloudy; 60 degrees at return. Partly in woods, partly along road past fields and a few houses. 41 species, including Yellow-throated Vireo and Chestnut-sided and Black-throated Green Warblers, not seer later

8:55 a. m. to 6:40 p. m. Weather partly cloudy. I walked up a creek till it dwindled to a brook, came back by road, and spent some time in higher woods. The hunt included low and high woods, fields, a creek, and a village. 54 species (59 for the day).

May 8th. 4:50 a. m. to 9:00 a. m. Weather, first half, foggy; second half, mostly fine. Entirely a road hunt: through fields and past farmhouses, a village, and an occasional small wood. 39 species, including Sparrow Hawk (1), Orchard Oriole (2), Scarlet Tanager (2), Red-eyed Vireo (4), House Wren (1), and White-breasted Nuthatch (4) not mentioned before.

9:50 a. m. to 1:30 p. m. Weather fine; 72 degrees at start, 77 degrees at return. Like the long hunt of preceding day, but not so extended. 38 species, none seen this hunt only, except Hairy Woodpecker (2.)

50 minutes spent near house, beginning at 2:30 p. m. yielded six species. 35 of these minutes were in woods, where we saw only several Swifts.

House to station, mostly by wagon; 4 miles; 3:35 to 4:35. 22 species, including Heron, species unknown (1), Mourning Dove, Bob-white (1 pair), and Bank Swallow not seen before, making me 68 species for the two days.

I was alone until Saturday night, (the 7th), when Mr. G. E. Hix joined me, and we were together from then on. He had hunted that afternoon, seeing Marsh Hawk and Cliff Swallow, the only ones seen.

The most striking thing about these hunts is the scarcity of migrants. The Warbler swarms which should have been met with every little way in the woods were almost entirely absent on Saturday and wholly so on Sunday. CHARLES H. ROGERS.

West Chester County, N. Y., May 5. Temperature 75. Clear. 5 a. m. to 7:30 p. m. FREDERICK C. HUBEL.

Cupola, Chester County, Penn., May 8. Weather clear and warm. Peach and cherry trees in full bloom, apple buds just bursting. 5 a. m. till dark. A 200 acre farm, with a creek and woods, carefully worked. CHRESWELL J. HUNT.

	1 Oberlin, Ohio May 9	2 Tiffin, Ohio May 10	3 Cadiz, Ohio May 8	4 Columbus, O. May 23	5 Morton Park, Ill., May 8	6 Rock Island, Ill., May 14	7 West Chester N. Y., May 5	8 Nor. N. J. May 6, 6:15 p.m. to May 8, 8:55 p. m.	9 Cupola, Chester Co. Pa., May 8
Pied-billed Grebe	....	....	....	....	....	....	2	.....	....
Herring Gull	2	....	....	....	....	....	50	.....	....
Mallard	1	....	....	....	....	....	....	.....	....
Great Blue Heron	....	1	....	1	....	x	....	.....	....
Green Heron	3	7	....	x	....	....	....	.....	x
Virginia Rail	3	....	....	....	....	....	....	.....	....
Sora	2	....	....	....	....	....	....	.....	....
American Woodcock	3	....	....	....	....	....	....	.....	....
Wilson Snipe	7	....	....	....	....	....	....	.....	....
Pectoral Sandpiper	....	2	....	....	....	....	....	.....	....
Baird Sandpiper (?)	....	2	....	....	....	....	....	.....	....
Least Sandpiper	10	....	....	....	....	....	....	.....	....
Red-backed Sandpiper	....	2	....	....	....	....	....	.....	....
Greater Yellow-legs	2	1	....	....	x	....	....	.....	....
Yellow-legs	3	4	....	x	....	....	....	.....	....
Solitary Sandpiper	c	4	....	....	....	....	....	2	....
Bartramian Sandpiper	2	2	....	....	....	....	....	.....	x
Spotted Sandpiper	c	11	x	x	x	....	....	6	x
Killdeer	c	3	x	x	....	....	....	.....	x
Bob-white	2	2	4	x	x	x	1	2	x
Ruffed Grouse	....	....	1	....	....	....	....	1	....
Mourning Dove	c	7	x	x	x	x	2	1	x
Turkey Vulture	....	1	....	x	....	....	....	1	x
Marsh Hawk	....	....	....	....	....	....	2	1	....
Sharp-shinned Hawk	....	....	....	x	....	....	1	.....	....
Cooper Hawk	1	....	1	x	....	....	1	.....	....
Red-tailed Hawk	2	1	1	x	....	x	2	.....	....
Red-shouldered Hawk	2	....	....	x	....	....	8	1	....
Broad-winged Hawk	1	....	....	....	....	....	1	.....	....
Bald Eagle	....	....	....	....	....	....	....	1	....
Am. Sparrow Hawk	3	2	....	x	....	....	....	1	x
Am. Osprey	....	....	....	....	....	....	3	.....	....
Barred Owl	2	....	1	....	....	....	1	.....	....
Screech Owl	1	1	....	1	....	x	2	.....	....
Great Horned Owl	1	....	1	1	....	....	....	.....	....
Yellow-billed Cuckoo	....	1	....	x	x	....	3	.....	....
Black-billed Cuckoo	4	1	....	....	....	....	....	1	....
Belted Kingfisher	2	1	x	x	....	....	7	.....	x
Hairy Woodpecker	1	1	x	x	....	x	4	1	....
Downy Woodpecker	4	5	x	x	x	x	7	1	x
Yellow-bellied Sapsucker	1	....	....	....	x	....	7	.....	....
Red-headed Woodpecker	c	12	x	x	x	x	1	.....	x
Red-bellied Woodpecker	....	1	x	x	....	x	....	.....	....
Northern Flicker	c	8	x	x	x	x	12	5	x
Whippoorwill	7	1	....	....	....	x	....	.....	....
Nighthawk	2	2	....	x	....	x	1	.....	x
Chimney Swift	c	30	x	x	x	x	A	50	x
Ruby-throated Hummingbird	3	1	2	x	....	x	....	.....	....
Kingbird	6	2	x	x	....	x	3	4	x
Crested Flycatcher	c	1	x	x	....	x	1	3	x

	1	2	3	4	5	6	7	8	9
Phoebe	c	5	x	x	x	x	14	8	x
Wood Pewee	c	6	x	x	x	x	11	.....	x
Yellow bellied Flycatcher	1	....	....	....	....	....	....	.....	....
Green-crested Flycatcher	5	3	....	....	....	....	....	.....	....
Alder Flycatcher	7	4	....	x	....	x	....	.....	....
Least Flycatcher	c	1	x	....	x	....	6	4	....
Prairie Horned Lark	4	3	....	x	....	x	....	.....	....
Blue Jay	c	3	x	x	x	x	12	8	x
Am. Crow	c	11	x	x	x	x	75	27	x
Bobolink	c	45	x	x	x	x	26	3	....
Cowbird	c	15	x	x	x	x	4	4	x
Red-winged Blackbird	c	10	x	x	x	x	80	8	x
Meadowlark	c	35	x	x	x	x	23	13	x
Orchard Oriole	6	2	x	x	....	x	....	2	....
Baltimore Oriole	c	20	x	x	x	x	9	3	x
Purple Grackle	....	....	....	....	....	....	....	2	x
Bronzed Grackle	c	10	x	x	x	x	8	....	....
Purple Finch	2	....	....	....	....	....	....	16	....
Am. Goldfinch	c	8	x	x	....	x	1	26	x
Vesper Sparrow	c	12	x	x	....	....	7	3	x
Savanna Sparrow	....	1	....	....	....	....	....	.....	....
Grasshopper Sparrow	4	9	x	x	x	....	....	4	x
Henslow Sparrow	....	....	....	....	....	....	....	.....	x
Lark Sparrow	....	....	....	....	....	x	....	.....	....
White crowned Sparrow	c	4	2	1	x	....	3	.....	....
White-throated Sparrow	c	6	x	3	x	x	....	10	....
Tree Sparrow	....	1	....	....	....	....	4	.....	....
Chipping Sparrow	c	10	x	x	....	x	40	12	....
Field Sparrow	c	2	x	x	x	x	20	7	x
Slate-colored Junco	....	....	....	....	....	....	4	1	....
Song Sparrow	c	30	x	x	x	x	70	25	x
Swamp Sparrow	c	....	....	....	....	x	....	7	....
Towhee	c	4	x	x	x	x	2	2	x
Cardinal	3	6	x	x	x	....	....	.....	x
Rose breasted Grosbeak	10	3	x	1	x	x	....	.....	....
Indigo Bunting	c	6	x	x	x	x	....	.....	....
Dickcissel	2	1	....	x	....	x	....	.....	....
Scarlet Tanager	c	5	x	x	x	x	1	2	....
Purple Martin	5	3	....	x	x	1	40	.....	....
Cliff Swallow	tc	....	....	x	....	x	16	1	....
Barn Swallow	c	6	x	x	....	x	20	22	x
Tree Swallow	2	....	....	....	....	....	5	.....	....
Bank Swallow	c	3	x	1	....	x	....	2	....
Rough-winged Swallow	tc	10	....	....	....	....	1	.....	....
Cedar Waxwing	5	....	....	....	....	....	....	.....	....
Migrant Shrike	1	1	....	....	....	x	....	.....	....
Red-eyed Vireo	c	3	x	x	x	x	....	4	x
Warbling Vireo	c	8	x	x	....	....	....	....	....
Yellow-throated Vireo	tc	4	2	x	....	x	....	.....	...
Blue-headed Vireo	tc	2	1	....	....	....	....	.....	....
White-eyed Vireo	....	....	....	....	x	....	....	4	x
Bell Vireo	....	....	....	....	....	x	....	.....	....
Black and White Warbler	c	1	1	x	....	....	....	6	x
Prothonotary Warbler	1	....	....	....	x	....	....	.....	....
Blue-winged Warbler	....	6	....	....	....	x	....	2	x
Golden-winged Warbler	....	1	....	....	....	....	....	.....	....
Nashville Warbler	c	....	....	....	....	x	....	.....	....
Orange-crowned Warbler	1	1	....	....	....	x	....	.....	....

	1	2	3	4	5	6	7	8	9
Tennessee Warbler	c	2	x		....	x	....	.....	....
Northern Parula Warbler	....	6	....	....	....	....	....	5	....
Yellow Warbler	c	20	x	x	x	x	4	8	x
Black-throated Blue Warbler	c	1	2	x	x	....	....	.....	....
Myrtle Warbler	c	5	3	....	x	....	....	6	x
Magnolia Warbler	c	15	x	x	x	x	....	.....	....
Cerulean Warbler	1	1	3	1	....	....	....	....	....
Chestnut-sided Warbler	c	2	x	....	x	x	....	.....	....
Bay-breasted Warbler	t c	2	....	x	x	x	....	.....	....
Black-poll Warbler	1	6	....	x	x	x	....	.....	x
Blackburnian Warbler	c	1	2	x	....	x	1	1	....
Black-throated Green Warbler	c	2	x	....	x	x	....	....	....
Kirtland Warbler	1	....	....	....	....	....	....	.....	....
Pine Warbler	....	2	....		....	....	....	.....	....
Palm Warbler	....	2	....	....	x	....	....	.....	....
Prairie Warbler	1	....	....	....	....	....	....	.....	....
Oven-bird	c	3	x	x	x	x	....	6	x
Water-Thrush	7	....	1	....	....	x	....	2	....
Louisiana Water-Thrush	2	1	x	x	....	....	....	.....	....
Kentucky Warbler	....	....	x	3	....	....	....	.....	....
Connecticut Warbler	2	....	....	....	....	....	....	.....	....
Mourning Warbler	t c	1	....	1	....	....	....	.....	....
Northern Yellow-throat	c	8	1	x	x	x	....	10	x
Yellow-breasted Chat	t c	5	x	x	....	....	....	2	x
Hooded Warbler	1	....	....	....	....	....	....	.....	....
Wilson Warbler	1	1	....	2	....	....	....	.....	....
Canadian Warbler	t c	2	2	....	....	....	....	.....	x
Am. Redstart	c	11	x	x	x	x	....	7	x
Am. Pipit	c	....	....	....	....	....	....	35	....
Catbird	c	50	x	x	x	x	18	18	x
Brown Thrasher	t c	2	x	x	x	x	2	1	x
Carolina Wren	....	....	1	x	....	....	....	.....	....
House Wren	c	16	....	x	....	x	10	1	x
Winter Wren	1	....	1	....	....	....	....	.....	....
Long-billed Marsh Wren	2	....	....	....	....	....	....	.....	....
Brown Creeper	....	....	....	....	....	....	1	.....	....
White-breasted Nuthatch	5	2	x	x	...	x	8	4	x
Red-breasted Nuthatch	c	....	....	....	....	....	15	.....	....
Tufted Titmouse	5	5	x	x	....	....	....	4	....
Chickadee	7	2	x	x	x	x	20	.....	....
Golden-crowned Kinglet	....	4	....	....	....	....	1	.....	....
Ruby-crowned Kinglet	t c	1	....	x	x	x	....	.....	....
Blue-gray Gnatcatcher	c	20	....	x	....	....	....	.....	....
Wood Thrush	c	9	x	x	x	x	16	5	x
Wilson Thrush	c	2	x	....	....	x	2	2	....
Gray-cheeked Thrush	c	....	....	....	x	x	....	.....	....
Olive-backed Thrush	c	1	x	....	x	x	....	.....	....
Hermit Thrush	2	1	....	....	....	....	1	.....	....
Am. Robin	c	50	x	x	x	x	A	50	x
Bluebird	c	6	x	x	x	x	18	9	x
Totals	128	112	80	90	56	76	65	66	53

OBERLIN ALL DAY WITH THE BIRDS. 1904.

Two somewhat different styles of "All Day" work were attempted during the past remarkable May migrations. The one followed the general lines of previous work, for the purpose of determining what one man, or two working as one, could do in a single day in recording the birds of this region; the other attempted to cover practically all the different regions and sorts of topography and physical features by working in companies of two persons each, the combined lists so made determining the day's record. This work may be called the "Company All Day" record. It is clear that such cooperative work would result in a much larger list, given the same conditions, than individual work, provided the individual be unable to cover the same territory in a day. Two elements enter into individual work of this sort which seriously hinder the searching of certain haunts of some birds; these are the time available in a single day, and physical endurance. If one could be certain what species were to be found in certain regions it would be possible to clean such region up and pass on to the next, but since this is almost never true, he must determine how much time it will be profitable to spend here and there and yonder, seeking to make each stop count for the most. There must be no actual stop in the lookout for species, for at no time and in no place out of doors is there no possibility of making some new record for the day. One must be on the keen edge constantly.

It has already been hinted that the present May migrations have been remarkable in many ways, in northern Ohio, if not elsewhere. Elsewhere will be found an article which attempts to give some conception of the conditions prevailing in Lorain County during April and May.

For the sake of continuity the "Company All Day" on May 7 is given first. The accompanying table groups the participants, giving to each group credit for the records made. In the same table will be found the writer's personal record, two days later, and two records by Mr. Dawson and the writer, at later dates, when foliage and the progress of the migrations proved unfavorable for more than ordinary lists. The total of 131 species for the "Company All Day," and of

128 for the writer's personal record fully attest the crowded character of this period of the migrations. It will be noticed that no less than 18 species were recorded later which should have been recorded by the company, and that seven other species were certainly in the region covered but were not seen on that day. Some of these would almost certainly have been found had the writer's original plan been carried out, but circumstances made that impossible.

The first group, consisting of Mr. R. L. Baird and Mr. S. D. Morrill, spent Friday night at Oak Point, in order to be ready for work at earliest dawn. Their work included a careful survey of the lake and its shore line in the immediate vicinity of Oak Point, the marshes at the month of Beaver Creek in the regions of slack water, and the woods and fields within a radius of a mile or less with the Oak Point grounds as a center. Mr Baird visited Chance Creek during the evening, but without success.

Messrs. D. E. Nye and H. H. Skinner composed the second group. Mr. Nye spent the early morning in the gorges of Black River at Elyria, while Mr. Skinner spent the early morning hours in the Black Swamp woods, three miles northeast of Oberlin, later meeting Mr. Nye in Elyria. After spending some time with the warblers in the woods in that vicinity, they took trolley to Lorain, and finally to Oak Point, supplementing the work there of the first party, returning home, with Mr. Morrill, by trolley.

The third group, Mr. Harold Vincent and the writer, spent the early morning in the old South Woods, a mile south of Oberlin, and since neither could continue the work after noon, they practically exhausted the possibilities of that woods before leaving it at ten o'clock, visiting an orchard in the outskirts of town, the water-works reservoir, Arboretum and cemetery, finally returning with a list of exactly 90 species for the morning. During the afternoon two more species were accidentally added. The original plan of this third group contemplated a visit, during the afternoon, to a region where Broad-winged Hawks, Ruffed Grouse, Barred Owls and Carolina Wrens were nesting, none of which were seen during the day.

The accompanying table clearly indicates that the Oak Point region is by far the richest single region of the vicinity. This is more clearly proven when it is known that of the writer's personal list of 128 species 120 were recorded at Oak Point. Here are combined lake shore, marsh, muddy flats, wet woods, open woods, heavy woods, brushy tangles, rolling fields and flat wet fields. Farm houses and extensive orchards entice some birds which usually remain several miles inland.

The day was more nearly ideal than any succeeding day when work of this sort was attempted. The temperature ranged from 57 degrees at 3 o'clock in the morning to 80 degrees during the middle of the day. The air was decidedly chilly during the early morning hours, but the sky was clear until near noon, when threatening clouds appeared, later breaking away to fair. The wind was s. e , light to brisk, dying away in the evening

Species marked A were abundant, C, common, T. C. tolerably common, F, few in numbers Figures indicate the number seen.

May 9th was a very different day. Three o'clock in the morning found the writer at Oak Point, a half-hour too early for the first bird, which proved to be the only Screech Owl of the day. When the Whip-poor-wills began, a few minutes later, the Nighthawks, Cardinals, Catbirds and Field Sparrows were aroused for their first sleepy songs. Within half an hour most birds were singing or calling. At 1:30 a. m. the sky was half cloudy, with a brisk southwest wind to help push the wheel over the dozen miles of road. At 6:30 the wind had shifted to west by south and increased to heavy, driving dark clouds before it, accompanied by a dash of fine rain and a perceptible drop in the temperature. By 10 o'clock the temperature had dropped from 70 degrees at the starting to 54 degrees, the heavy wind and dark sky continuing, but without rain At the approach of the storm all birds dropped from the tree-tops or higher branches to the ground, or near it, and remained low down during the day. They lost their timidity, most warblers permitting an approach within ten feet or less. It was during the last of the fine rain that a fine male of Kirtland Warbler stopped near me and remained within twenty feet, often within eight, for at least ten min-

utes, but he refused to sing. Later the rare Prairie and about noon the still rarer Hooded, were found in the low foliage. In a swampy woods half a mile south of Oak Point, the first Prothonotary Warbler for Lorain County was feeding and singing, permitting a close approach and excellent study. This would have amply atoned for the cold and wet of the day, but a little later a Yellow-bellied Flycatcher, which has eluded me for a dozen years, darted into view from a fringing thicket of the woods. Many other birds which do not ordinarily seek the shelter of the woods were found in the lea of the thickets, where the wind did not reach them. The abundance of all thrushes except the Hermit, exceeded anything which the county has seen during my stay in it. The weather seemed impossible, but since the birds were here the record depended only upon field work under adverse conditions.

The evening of May 13th did not give promise of anything worthy during the following morning, but a determination born of necessity found expression in a trolley ride to Oak Point during that evening, and a search for the soft side of a reasonably clean plank, in a cold, bleak drizzle. The plank proved to be a convenient broken-down bedstead, with dilapidated springs—and mattress, under cover! Being too case-hardened to fear microbes, we slept peacefully until early morning twilight. Clearly, the weather had gone mad, but during its few lucid intervals the birds sang and sported about in spite of rain and cold. The day began at 45 degrees and did not reach 60 during even the noon hour. Rain fell rather more than half the day. The walk overland to Oberlin added but five species to the day's list, thus equalling the largest list previous to this year—113 species.

Not satisfied with the previous record, Monday, May 16, found us again in the field, reversing the course of study by beginning, as in previous years, at the old South Woods at three in the morning. Leaving this usually favored place shortly after 7 o'clock, and home an hour later, we wheeled leisurely to Oak Point, making many stops by the way. The list had reached 94 when the wheels were cached at 11:30, a mile south of the lake. Here the physical strain of two days before began to affect our ability to do effective work. The keen edge had worn off. Shortly after dinner Dawson was

obliged to move homeward. Rather hasty work in the two swamps which had not yet been touched, a brief visit to the lake shore, and a hurried search through a half mile of woods, closed the day at 5:30. Dawson had recorded Cooper Hawk on the way home, making the combined list reach 114. The morning opened with a light frost in low places, but clear until late in the afternoon. The temperature reached 60 degrees during the day, with a brisk westerly wind dropping completely down before night. The foliage seriously interfered with rapid identification, but was little more troublesome than on the 14th. Up to the 11th neither blossoms nor leaves were far enough advanced to give trouble.

The work of the 16th closed a series of record breaking all day studies. While it was serious work, sapping the vitality, it yet gave full value in return in showing the exceptional character of the season of migration. Three times within ten days the previous best record was broken, and the fourth day equalled. A new high-water mark was made, which nothing but another exceptional season can hope to equal, while a new record for co-operative work has been established as the beginning of a long series of such studies, we may well hope. A series of such co-operative studies in any given region can hardly fail to throw light upon some of the vexing questions of local migration, and furnish material for the broader study when made in connection with similar studies in contiguous regions.

	May 7. Company			May 9	May 14	May 16
	Baird Morrill	Nye Skinner	Jones Vincent	Lynds Jones	Dawson Jones	Dawson Jones
Pied-billed Grebe	1	1				
Herring Gull	1	1		2	7	4
Bonaparte Gull					1	
Common Tern	2	10				12
Black Tern					2	
Red-breasted Merganser	1					
Mallard				1		1
Lesser Scaup Duck	1	1				
American Bittern	4	1				
Least Bittern						1
Green Heron	2	1		3		3
King Rail	1					1
Virginia Rail	3	1		3	4	2
Sora	1			2	4	5
American Woodcock	3		2	3	5	3
Wilson Snipe	1			7		1
Least Sandpiper				10		
Greater Yellow-legs	1			2		1
Yellow-legs	3			3	1	
Solitary Sandpiper	f e	2	1	c	c	c
Bartramian Sandpiper			1	2	1	2
Spotted Sandpiper	t c	c	2	c	c	c
Killdeer	t c	3		c	c	c
Bob-white	f e	2		2	1	1
Mourning Dove	t c	t c	c	c	c	c
Turkey Vulture	3	1				1
Marsh Hawk	1					
Sharp-shinned Hawk	1	1			1	
Cooper Hawk				1	1	1
Red-tailed Hawk	1			2	1	
Red shouldered Hawk		1	2	2	2	2
Broad-winged Hawk				1		
Am. Rough-legged Hawk	1					
Bald Eagle	2				1	
Am Sparrow Hawk	f e	1	3	3	3	1
Am Osprey	1	f				
Barred Owl				2	1	1
Screech Owl		t		1		
Great Horned Owl	1			1	1	
Yellow-billed Cuckoo	1	1				
Black-billed Cuckoo	1		2	4		
Belted Kingfisher	f e	2	1	2	1	
Hairy Woodpecker	1	2	2	1	3	5
Downy Woodpecker	f e	2	3	4	t c	t c
Yellow-bellied Sapsucker		t c		1		
Red-headed Woodpecker	c	t c	c	c	c	c
Red-bellied Woodpecker		1			1	
Northern Flicker	c	5	c	c	c	c
Whippoorwill	c	1	1	7	10	1
Nighthawk				2	2	

	May 7	May 7	May 7	May 9	May 14	May 16
Chimney Swift	A	c	c	c	c	c
Ruby-throated Hummingbird	2	2	.....	3	3	3
Kingbird	f e	t c	c	6	t c	c
Crested Flycatcher	c	t c	2	c	c	c
Phoebe	f c	t c	2	c	c	c
Wood Pewee	f c	t c	x	c	c	c
Yellow-bellied Flycatcher	.....	.....	.....	1	.....	.....
Green-crested Flycatcher	f e	2	c	5	F	t c
Alder Flycatcher	f e	.....	1	7	F	F
Least Flycatcher	t c	t c	c	c	c	c
Prairie Horned Lark	t c	t c	4	4	F	F
Blue Jay	c	3	c	c	c	c
American Crow	c	6	c	c	c	c
Bobolink	A	c	c	c	c	c
Cowbird	c	t c	c	c	c	c
Red-winged Blackbird	A	c	c	c	c	c
Meadowlark	c	c	c	c	c	c
Orchard Oriole	1	1	4	6	F	F
Baltimore Oriole	f c	c	c	c	c	c
Bronzed Grackle	c	c	c	c	c	c
Purple Finch	.....	.....	x	2	.....	.....
American Goldfinch	c	t c	c	c	c	c
Vesper Sparrow	c	c	c	c	c	c
Grasshopper Sparrow	c	3	10	4	4	F
White-crowned Sparrow	15	7	.....	c	c	c
White-throated Sparrow	t c	3	c	c	c	c
Chipping Sparrow	f e	c	c	c	c	c
Field Sparrow	t c	c	c	c	c	c
Song Sparrow	c	c	c	c	c	c
Lincoln Sparrow	.....	.....	.....	.....	.....	1
Swamp Sparrow	t c	2	8	c	c	c
Towhee	t c	c	c	c	c	c
Cardinal	f e	3	2	3	t c	t c
Rose-breastedGrosbeak	f e	t c	x	10	t c	t c
Indigo Bunting	f e	2	c	c	c	c
Dickcissel	.....	.....	.....	2	.....	.....
Scarlet Tanager	f e	t c	c	c	c	c
Purple Martin	1	1	2	5	F	F
Cliff Swallow	f e	1	.....	t c	F	F
Barn Swallow	A	c	c	c	c	c
Tree Swallow	.....	.....	.....	2	F	F
Bank Swallow	A	2	.....	c	c	c
Rough-winged Swallow	A	3	.....	t c	t c	t c
Cedar Waxwing	.....	7	.....	5	7	20
Migrant Shrike	1	.....	.....	1	1	1
Red-eyed Vireo	.....	.....	c	c	c	c
Warbling Vireo	c	2	c	c	c	c
Yellow-throated Vireo	f c	3	x	t c	t c	t c
Blue-headed Vireo	f e	5	x	t c	t c	F
Black and White Warbler	f e	t c	c	c	F	F
Prothonotary Warbler	.....	.....	.....	1	1	.....
Blue-winged Warbler	2	c	x	.....	.....	F
Golden-winged Warbler	.....	.....	1	.....	.....	.....
Nashville Warbler	t c	t c	c	c	c	c
Orange-crowned Warbler	.....	.....	.....	1	1	.....
Tennessee Warbler	.....	t c	c	c	c	c

	May 7	May 7	May 7	May 9	May 14	May 16
Northern Parula Warbler					1	
Cape May Warbler						2
Yellow Warbler	c	c	c	c	c	c
Black-throated Blue Warbler	tc	c	c	c	c	c
Myrtle Warbler	tc	c	c	c	tc	F
Magnolia Warbler	c	c	c	c	c	c
Cerulean Warbler		c	c	1		c
Chestnut-sided Warbler	c	c	c	c	c	c
Bay-breasted Warbler	1	5	tc	tc	f	4
Black-poll Warbler	2			1		
Blackburnian Warbler	c	c	c	c	c	c
Black-throated Green Warbler	c	c	c	c	c	tc
Kirtland Warbler				1		
Palm Warbler	c	2	1			
Prairie Warbler				1		
Oven-bird	c	c	c	c	c	c
Water-Thrush	6†		2	7	4	6
Louisiana Water-Thrush		1		2	4	2
Connecticut Warbler		2	1	2		
Mourning Warbler			1	tc		1
Northern Yellow-throat	c	c	c	c	c	c
Yellow-breasted Chat	2	1	2	7	tc	tc
Hooded Warbler				1		
Wilson Warbler	fe	3	1	1	1	1
Canadian Warbler	tc	3	2	tc	tc	F
American Redstart	c	c	c	c	c	c
American Pipit	5†		c	c	c	tc
Catbird	tc	c	c	c	c	c
Brown Thrasher	fe	3	tc	tc	tc	to
House Wren	2	c	c	c	c	c
Winter Wren	5			1		
Short-billed Marsh Wren					2	2
Long-billed Marsh Wren	5†			2	4	4
White-breasted Nuthatch	fe	3	f	5	f	F
Red-breasted Nuthatch	tc	tc	2	c	c	tc
Tufted Titmouse	tc	3	4	5	f	F
Chickadee		3	4	7	f	F
Ruby-crowned Kinglet	fe		c	c		2
Blue-gray Gnatcatcher	fe	1	c	c	tc	tc
Wood Thrush	tc	c	c	c	c	c
Wilson Thrush	c	c	c	c	c	c
Gray-cheeked Thrush	1	3	c	c	c	c
Olive-backed Thrush	A	c	c	c	c	c
Hermit Thrush		1	2	2		
American Robin	c	A	c	c	c	c
Bluebird	fe	c	c	c	c	c
Totals	115	105	92	128	113	114
Grand Total		131				

Total for May 7 to 16, inclusive, 152.

AN "ALL DAY" BIRD STUDY.

BY BURTIS H. WILSON.

I left the house on the morning of the 15th, at 5 a. m., returning for breakfast at 6, and then returning to the fields to remain until 12 o'clock. The night had been very cold and a heavy dew had fallen, making the air so chilly that it was nearly noon before my overcoat could be discarded. It was an ideal day for bird observation, as there was no wind, and the cold of the morning hours made the birds sluggish, so that it was nearly noon before the Warblers began to seek the higher tree-tops. I noticed, however, that the cold did not prevent the Warblers from singing almost incessantly, even as early as I started out. During the day eggs were found in the nests of Crows, Blue Jays, Mourning Doves and Brown Thrashers, also a Robin's nest with one egg and two newly hatched young.

On account of the extremely backward spring, not only the migrations, but the nest-building, is at least two weeks later than usual with our early arrivals. After losing about forty-five minutes at the dinner table, I again sought the fields, spending the time until 5:15, when we sat down to supper. At 5:45 Mr. Montgomery's son and I started to drive back to town. We reached Milan, on the Rock River, at 7 o'clock, where I entered an electric car and ended my day's observations. Now comes what is to me the interesting part of my story.

During the day I did not see Red-winged Blackbirds, House Wrens, Yellow Warblers, Meadowlarks, Bank Swallows, or Wood Thrushes, until on returning to town we approached within three miles of Rock River, when one by one these birds were seen. This is also true of these birds on my way to the farm on the previous day, and also of several trips made in former seasons over the same ground, the only exception being the House Wren, which usually nests around the farm buildings, but has been seen there only a few times so far this year. Only one Purple Martin was seen during the day, but if we had reached Milan a little earlier more would, without doubt, have been seen, as they nest in the village. But if I had been early enough to see the Martins, I would

have missed the three Great Blue Herons which flew east, high over our heads, when we were still about a mile and a half from the river. Another peculiar fact is that I saw no Grasshopper Sparrows or Vesper Sparrows during the day. However, the latter bird does not seem to be as abundant this year as usual. I noted only one Cliff Swallow, but as they seldom go far from the barn where they nest, and their colonies are not very common, it is not to be wondered at. The most abundant migratory birds seen during the day were the Warblers (mostly Chestnut-sided, Nashville, Tennessee, and Redstarts), and the Gray-cheeked and Olive-backed Thrushes, the Thrushes being very abundant.

THE SONG OF THE DICKCISSELL. *Spiza americana.*

BY P. M. SILLOWAY

Whiling away a recent afternoon over some old piles of ornithological literature, I found an interesting article entitled "Dickcissell in His Illinois Haunts." One paragraph particularly attracted my attention: "The song of this interesting bird invariably begins with three notes, very much resembling the syllables *Dick! Dick! Dick!* These are followed by an indescribable warble with the notes running rapidly together." In his excellent characterization of the song, the writer perhaps unconsciously made use of a term which effectually limits Dickcissell to only one song, the one beginning with the three notes mentioned. Now it happened that during my last summer in Illinois, 1898, I made some special observations regarding the musical ability of Dickcissell, and it may not be amiss to record a part of the notes then entered in my journal. I trust that my friend Mr. Hess will not take this contribution as a criticism of his excellent article in that old Oologist, but merely as a further addition to our fund of recorded observations.

During July, 1898, my home at Virden, Illinois, was near a forty-acre pasture, which was cut into two nearly equal

parts by a railroad. A walk of one hundred yards along the railroad would take me to the pasture, which was tenanted by many families of Dickcissell. The volubility of this songster is well known. Sitting on the porch of my home, I could hear long after sundown the ringing phrases of Dickcissell, wafted to my ears on the clear summer air. It was my custom to walk over to the pasture about four o'clock every afternoon, and follow the tall, tree-like hedge which enclosed the pasture. During these walks I noted down many songs of Dickcissell, with a view to make a complete summary at the proper time. Circumstances, however, called me from Illinois before I accumulated sufficient data, but such as I have to offer may prove of interest. The words suggested by the songs are not vital to the descriptions, but are given as the nearest rendering into English occurring to my mind when the notes were made.

On July 13 I first fixed one particular Dickcissell as a part of a certain detail of the meadow. He soon became a landmark in my walks. His first song was like this: *Dick, dick, ciss ciss sell*, and this rendition proved to be his favorite production. Frequently I could hear in it: *Quick, quick, sell sell sell*, both songs being strongly emphasized at the last syllable. Only rarely would this songster offer: *Dick, dick, dick, sell sell sell.*

In another angle of the pasture I was sure to hear a performer who was seemingly addicted to bad habits, for as I drew near his station, he would generally take a stand on a tall weed and shrill out lustily: *Quick, quick, gi'me a chew.* Frequently he would become so importunate as to repeat his plea: *Quick, quick, gi'me a chew, gi'me a chew.* The characteristic production of this songster began with only two notes, but sometimes he would vary the performance by uttering three *dick* or *quick* notes at the beginning. Once I was in another frame of mind, perhaps, though I am free to say that I do not *chew*, for I heard this songster utter, *Dick, dick, miniature*, twelve times in a minute, shortly after he had shouted *Gi'me a chew.*

In the same portion of the pasture where I met the first Dickcissell, another nearby performer would regularly chant: *Dick, dick, quee quee quee, ciss ciss sell.* After a generous

measure of this song, he would change it to: *Dick, dick, dick, ciss ciss sell.* One tenant of the pasture offered a most original production as his characteristic song, which seemed to run like this: *Quick, quick, looky here, skeezics.* After trifling with me in the foregoing manner several times, the last songster would boldly omit the introductory notes, and call out: *Looky here, skeezics, see see see.* It is interesting to note that this songster had four or five songs easily distinguishable. One of his common offerings was like this: *Dick, dick, queerily;* again he would say: *Quick, queerily, quee vee.*

On July 20 I have the following production of another performer: *Dick, dick, dick, queerily, chew chew chew.* This song was frequently varied by changing the number of the *dick* notes, as sometimes only two were given, and occasionally four *dicks* formed the beginning measures.

On July 21 I found a performer who gave the following variation of the characteristic song: *Dick, dick, dick, ciss sell.* Sometimes he would utter only two *dicks*, and frequently, by way of surprise, he would call: *Dick, dick, dick, dick*, omitting the customary phrase in closing.

July 23 brought a new rendition of my July 20th songster's production. This is what I heard: *Dick, dick, dick, what d'ye see see sell.* This peculiar song was varied by changing the number of introductory notes to only two, and sometimes by giving four. Another different song heard on that day went like this; *Quee, quee, quee, quee,—Dick ciss sell*, uttered sometimes with only two *dicks* and three *quees*, like this: *Quee, quee, quee,—Dick, dick, ciss sell.*

July 26 furnished the following records: *Dick, dick,—sell sell sell, see*, which was varied to: *Dick, sell sell see.* The latter, offering only one *dick*, is the most unusual performance of Dickcissell. The same songster furnished this record: *Dick, dick, sell sell sell, quee quee quee;* and also this: *Dick, sell sell sell, quee*, as well as: *Dick ciss sell, quee quee quee.* The following is the most unique record taken, but I think it will stand comparison with the original, *Ciss sell, ciss sell, que, ciss sell.*

SPRING MIGRATION IN LORAIN COUNTY, O., 1904.

BY LYNDS JONES.

There are migrations and migrations, but the migrations of 1904 have proved to be in a class by themselves. For eleven years I have studied both spring and fall migrations at Oberlin with more or less care, and for six years at Grinnell, Iowa. Only once during this period of seventeen years has there been anything like what we have witnessed this year. That was in the spring of 1888, at Grinnell, Iowa, when the weather conditions were somewhat similar during the last days of April and the first two weeks of May.

In 1888 the weather had been about normal up to the middle of April, when a decided warm wave of considerable extent called the early warblers, and other birds which travel with them, north. This wave subsided on the 28th under the pressure of a decided change to cold, cloudy weather, particularly cloudy nights. This unfavorable condition prevailed, with frost on the 13th, 14th and 16th of May, with continued cloudiness and northerly winds, until the 17th. The warm wave which followed brought the birds in swarms, bright males, young, and females, all in the same company, some of them apparently already mated. There were scattering arrivals during the interval, but these were largely confined to hardy individuals and did not represent the forward movement of the host. Some of the migrants tarried until June 10.

The season of 1904, while clearly below the average in temperature for nearly the whole of March, seemed to be opening on the first of April, but speedily made good the traditions of the day, for snow fell on the 3rd. A feeble warm wave on the 8th, 9th and 10th made very little impression on the birds. Another warm wave, covering the 21st, 22nd, 23rd and 24th, caused a sprinkling of arrivals, but the suc-

ceeding eight days were cold and wet, with northerly winds. Then followed a period of warmth and hope for eight days, with maximum temperatures ranging from 62 degrees on the 3rd to 84 degrees on the 7th, culminating on the 9th with a morning storm of rain and cold. More cold on the 10th, 11th and 12th, followed by two warm, and these by six cold days, closed the season so far as arrivals were concerned. At the present writing (May 27) a few of the transient warblers remain.

There had been no distinct movement up to May 4th, but scattering records of hardy individuals proved that the host was not far to the south. Clearly, the weather a hundred miles south was more favorable for the movement of the birds than at Oberlin, during the first five days of May. On the 6th matters began to turn to decidedly favorable, and on the 7th the belated birds rushed in by hundreds. The three succeeding nights were impossible for northern movement. In fact, only the night of the 12th gave much opportunity for migration in the darkness, and evidently not many birds were ready then, and they were obliged to wait until the 21st and 22nd, when the hosts moved north, leaving the 23rd with only the laggards.

As in 1888, brilliant males, females and young, were found together, and apparently in nearly equal numbers. Mating was clearly in progress. Very few birds, except the Raptores and Robins, had succeeded in making much progress in raising broods. Red-winged Blackbirds, which often have young before this time, had scarcely even begun their nests.

One of the most noticeable features of this exceptional migration was the superabundance of Grey-cheeked and Olive-backed Thrushes. For days they were more numerous than Robins, overflowing from the woods into the bordering fields. Wilson and Hermit Thrushes were also unusually numerous, but their numbers were insignificant compared with the others. Many of the warblers were also more than usually numerous, notably the Magnolia, Blackburnian, Chestnut-sided, and Black-throated Blue. On the other hand, the Cuckoos and Wood Pewee were hard to find, and the Chickadee almost refused to be seen or heard. Red-breasted Nuthatches were fairly common for more than a week. One of

the disappointing features was the almost entire absence of any but the regular shore-birds. Lake Erie and the mud flats seemed to have no attraction for them.

The birds of greatest interest, the occurrence of which is worthy of special record are, first, Prothonotary Warbler, twice recorded, being the first county record; Kirtland Warbler, the second county record; Hooded Warbler, the third county record, at least three individuals seen; Yellow-bellied Flycatcher, the first seen in Ohio by the writer; Short-billed Marsh Wren, the third county record; Brewster Warbler, singing almost like the Blue-winged; and a Yellow Warbler with a dusky forehead, suggesting a cross between the Yellow and Northern Yellow-throat, but probably a freak, since the dark forehead, running from eye to eye, was the only Yellow-throat character. It fraternized with the Yellow Warblers, fed like them, acted like them.

Taken all together, this migration season has been a capital illustration of the effect of weather upon the later spring migrations. The weather had continued unfavorable, in the main, for northward movements in the more northern regions, while becoming gradually favorable south. The birds promptly pushed north as far as conditions warranted, then halted to await a change. For the bunching of species which do not regularly migrate at the same time, in a region like Northern Ohio, it has never been surpassed in my experience, and does not seem likely to be repeated in the near future. One who could fail to improve the opportunities for bird study which these conditions presented, must be either luke-warm or else sinfully busy!

A DOOR-YARD LIST FROM MORTON PARK, ILL.

BY ORPHEUS M. SCHANTZ.

The "Door-yard List" from Denmark, Iowa, in the March BULLETIN, was so interesting to me that the thought came that possibly the observations of my wife and I, made in our 50 by 125 foot yard during the last three years, might be of interest to others.

We live about seven miles southwest of Chicago, in a little suburb which, fifteen years ago, contained not a house,

tree nor shrub of any kind. To-day there is a comparatively small area containing trees or shrubs that amount to anything. Four blocks square will cover the bird field, except the prairie birds, for there is open prairie nearly all around us. The nearest timber of any importance lies along the Des Plaines River, about four miles west of Morton Park.

About half a mile north is a section of land, largely vacant, partially surrounded by a belt of trees, some of which are of good size. On the north and east of this tract the trees are planted so as to make a wide belt; on the south and west they are planted in a double row. The trees are principally box elders, soft maples, cottonwood, silver poplar, and balm of gilead.

In our little yard, and in front of it, are, altogether, ten Carolina poplars and cottonwoods, all about ten years old. These trees are very prolific in insect life, and with the profusion of vines—Virginia creeper, bitter sweet, night shade—it may be readily understood why we have been favored with so many "callers" during the spring and fall migration. We have always had the prairie birds, Meadowlarks, Horned Larks, Bobolinks, Dickcissels, quite a variety of Sparrows, and occasionally Bob-white, in the vacant fields around us.

Five or six years ago we first began to notice the migrants, and of course had to have a bird book Mabel Osgood Wright's Bird Craft proved a great help, and was in constant use for two years, when we discovered Chapman's Hand-Book, since then we have never failed to identify any newcomer. We scarcely ever have to refer to the book now, because we have become quite intimately acquainted with most of the residents and transient visitors. With the exception of the prairie birds, very few nest in Morton Park. Those that do are Robin, Bluebird, Chimney Swift, Chipping Sparrow and Yellow Warbler.

The first pair of Robins nested under a porch roof, within a few feet of the front door of a large residence. When the old gentleman who owned the house discovered the nest, he locked the door and allowed none to use it until the young birds were nearly full-fledged. On the second of March, this year, a flock of fourteen Robins made their appearance, evidently the descendants of the pair mentioned above.

Our first year's record was 25, the second 40, the third 75, and each year since then between 80 and 100. Each year brings either some new record, or brings back some visitors that have missed coming for a year or two.

By sitting on a broad window seat in our bedroom, we could look down into a wide spreading cottonwood, and in that tree we have identified a great many warblers and vireos that ordinarily are so hard to find and see satisfactorily. Last year we caught a fine male Florida Gallinule, which I think was tired and stopped to rest, as there was nothing the matter with it. We took it to Lincoln Park, where it may still be found. The park authorities were glad to get it.

The following birds were found in our door-yard:

Florida Gallinule, Mourning Dove, Screech Owl, Yellow-billed Cuckoo, Black-billed Cuckoo, Hairy Woodpecker, Downy Woodpecker, Red-headed Woodpecker, Northern Flicker, Whip-poor-will, Nighthawk, Chimney Swift, Ruby-throated Hummingbird, Kingbird, Wood Pewee, Least Flycatcher, Yellow-bellied Flycatcher, Blue Jay, Crow, Bobolink, Prairie Horned Lark, Meadowlark, Orchard Oriole, Baltimore Oriole, Bronzed Grackle, Yellow-bellied Sapsucker, Purple Finch, Goldfinch, Redpoll, Snowflake, Vesper Sparrow, White-crowned Sparrow, White-throated Sparrow, Tree Sparrow, Chipping Sparrow, Field Sparrow, Junco, Song Sparrow, Fox Sparrow, English Sparrow, Towhee, Rose-breasted Grosbeak, Indigo Bunting, Dickcissel, Scarlet Tanager, Summer Tanager, Purple Martin, Loggerhead Shrike, Red-eyed Vireo, Philadelphia Virec, Warbling Vireo, Yellow-throated Vireo, White-eyed Vireo, Bell Vireo, Black and White Warbler, Cape May Warbler, Yellow Warbler, Black-throated Blue Warbler, Myrtle Warbler, Magnolia Warbler, Chestnut-sided Warbler, Bay-breasted Warbler, Black-poll Warbler, Blackburnian Warbler, Black-throated Green Warbler, Palm Warbler, Oven-bird, Water-Thrush, Northern Yellow-throat, Yellow-breasted Chat, Wilson Warbler, Redstart, Mockingbird, Catbird, Brown Thrasher, Bewick Wren, House Wren, Winter Wren, Brown Creeper, White-breasted Nuthatch, Red-breasted Nuthatch, Chickadee, Golden-crowned Kinglet, Ruby-crowned Kinglet, Wood Thrush, Wilson Thrush, Gray-cheeked Thrush, Olive-backed Thrush, Robin, Bluebird.

THE WILSON BULLETIN

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EDITORIAL.

The editor will be at Woods Hole, Mass., after June 25, where letters should be addressed, until September 1st. After that date, and until the September BULLETIN is mailed, address Oberlin, Ohio.

Bird-Lore has established the Christmas Census, we have established the New Year Census and the May "All Day" record, and now are ready to add another to this intensive field study of the birds. Shall we not at least try to fittingly celebrate the birth of our nation by making a list of the birds to be found on that day? Would not such a use of the day be more in accord with the real spirit of the anniversary than the usual noisy and dangerous celebration? To those who record 75 or more species on July 4, 1904, the editor will present volumes 9 and 10 of the Wilson Bulletin, or a copy of Bulletin 31, "A Monograph of the Flicker." This summer study will include only the breeding birds and will therefore be of value as showing what birds nest in your vicinity. We trust that this beginning of the study of the breeding birds will prove so interesting that careful studies may follow. It is only by the careful study of the breeding birds of many localities that we shall be able to know for certain the actual distribution of many of our birds. Present day knowledge of summer distribution is largely general; we should make it exact by thoroughly working our own localities.

In asking for New Year records and May records, and now in asking for July 4th records, the editor has in mind a general campaign of field study such as few have ever undertaken systematically. He hopes to prove the intrinsic interest of this sort of work by inducing many to undertake it in these small ways so that they will be glad to broaden out to more and more studies. first looking toward monthly lists of the birds of each locality represented by an observer, and finally making these monthly records into strictly seasonal records for the purpose of determining accurately the bird population during each season. We

should then have Winter Birds, Birds of the Spring Migrations, Breeding Birds, Birds of the Fall Migrations. At first these would run into each other, but as the work grew and experience increased the different groups would separate themselves out, and the records would be of inestimable value in determining distribution. Monthly lists are not only possible but entirely feasible and within the reach of all who work in the field a little. Of course these monthly lists will not be complete, not even for the best of us, and likely not even if we could spend all our time in the field studying, for birds are not stationary structures and man's ability is limited, but they will be not less interesting for that reason. The check-book method of recording briefly field studies ensures annual, seasonal and monthly lists, for the record is a daily record. It is not complete, to be sure, but what is recorded is definite. It is also the easiest sort of record to keep. It can be made to give records of special localities if the observer wishes Thus the writer's check-book records the birds found at the water-works reservoir, on the college campus, in his yard, at Oak Point, while giving the whole general record, all in one column for each species for one day. Simply transcribing gives each list, or only one, at one's pleasure. At best book-keeping is irksome, but here the labor is small for the results obtained. Furthermore, the records, when there are any, are definite even if meagre. They may be made as full as one pleases. Our plea is for more field study looking toward the exact determination of the birds of your region. Work easily, but carefully.

PUBLICATIONS RECEIVED.

Bird Life Stories, Book One, by Clarence Moores Weed.

The book contains twenty-four chapters, each chapter treating of one familiar species. The author has taken the text from the writings of one of four of our most famous writers upon bird life, and therefore, the book is designed as a classical reader wholly devoted to birds. The four writers—Alexander Wilson, John James Audubon, Thomas Nuttall, and Charles E. Bendire are sufficient guaranty of the matter selected for these twenty-four familiar birds. The book is clearly designed on the lines of The Nature Calendar series which the author of this book has begun for the purpose of combining the usually uninteresting part of learning to read with a training of the senses to recognize the pupil's natural surroundings. It is unfortunate that the excellent quality of the text and general makeup of this admirable book should be marred by the quality of the colored pictures. The three color photograph process is responsible for not a little of the trouble, the mechanical process of printing being evidently carelessly done, but the taxidermy is not always satisfactory. We shall await the appearance of the other two numbers of this series with interest. The series is published by the Rand, McNally Company, Chicago. L. J.

Wild Birds in City Parks. By Herbert Eugene Walter and Alice Hall Walter, Third Edition.

'The new features of this edition are the addition of forty-five bird —the majority of which are shore and water birds—and a simple field

key.' Following 'General Hints' designed to aid in placing the birds under observation in the proper group, a brief description of each of the 145 species treated is given, with the names of other species with which it might be confused. There is a 'Table of Occurrence' giving the number of mornings out of the 454, during the years from 1898 to 1903 inclusive, when each was recorded. A 'Table of Arrival,' arranged systematically by families shows at a glance the year, month, and day of the first appearance of each species. A chapter of 'General Hints' upon the water and shore birds, where the larger groups are given, is followed by 'Particular Hints' upon each of the water birds given. A 'Migration Chart,' 'Key,' 'Glossary' and 'Supplemental List,' with the index, complete this closely packed little book of 66 pages. Inside the back cover there is a large checked blank for recording the migrations of the species given in the book, with additional spaces for other birds. This little book cannot fail to be of great service to those who, living in large cities, would know the birds which may be found in the parks.

L. J.

Gleanings No. III. The Haunts of the Golden-winged Warbler. By J. Warren Jacobs. Published by the author.

This thirty page brochure contains an admirable account of the summer haunts of the Golden-winged Warbler in the region of Waynesburg, Pa., from studies carried on every summer since 1891. The whole subject of nesting is interspersed with interesting descriptions of the region and with unusually good half-tones of both the region and the nesting places and nests. A color chart prepared by hand, and half-tone of a series of eggs close the work, with descriptions of sets of eggs. Mr. Jacobs is to be congratulated upon this close study of a little known warbler, and its clear presentation in interesting form.

L. J.

Birds of the Huachuca Mountains, Arizona. By Harry S. Swarth. Pacific Coast Avifauna No. 4. Cooper Ornithological Club of California. April 15, 1904.

In two pages of introduction the author acquaints us with the mountain range, its position and physical features. Sixty-three pages are devoted to 195 species and subspecies, most of them being copiously annotated. The paper is a model of faunal literature, treating of a very interesting region. L. J.

The Metallic Colors of Feathers from the Sides of the Neck of the Domestic Pigeon. By R. M. Strong, Reprinted from the Mark Anniversity Volume, Article XIII, pp. 263-277, plate XX, 1903.

This important contribution is the result of long continued careful study of the phenomena of metallic color reflections, chiefly from the neck of the domestic pigeon. Dr. Strong seems to have well nigh exhausted the lines of investigation and concludes that 'The metallic colors of these feathers are probably thin-plate interference colors or

Newton's rings effects which are produced where spherical pigment granules come in contact with the outer transparent layer. The pigment also has the very important function of absorbing light not reflected to the eye as metallic color. The colors seen without a microscope are mixtures of colors from innumerable small points.' L. J.

Birds from Benguet Province, Luzon, and from the Islands of Lubang, Mindoro, Cuyo, and Cagayancillo. By Richard McGregor. Bulletin of the Philippine Museum, No. 3, January 30, 1904.

This number of the Philippine Museum Bulletin is devoted to Zoographical Notes for Lubang, Mindoro, Verde, Cuyo, Agutaya, Cagayancillo, and Benguet Province, Luzon, to Undescribed Plumages and Notes on the Rarer Species, to New Localities for Known Species, and to a list of Species from Irisan, Benguet Province, Luzon. L. J.

Birds of Alleghany and Garrett Counties, Western Maryland. By G. Eifrig. From The Auk, Vol. XXI, No. 2, April, 1904.

The author prefaces the list proper with a brief but lucid discussion of the physical features of the region and the intricate life zones as illustrated by birds, mammals, and plants. The list contains mention of 180 species, with brief annotations. We welcome it as a thoroughly reliable local faunal list. L. J.

Wisconsin Arbor and Bird Day Annual, 1904. Compiled by Maud Barnett. Issued by C. P. Cary, State Superintendent.

This hundred page magazine is prepared with special reference to the school children, with pictures, sketches of birds and trees, selections of poetry, and articles written expressly for this Annual, or selected for their fitness. A number of full page photographs of trees from nature by A. W. Mumford, of Chicago, add to the attractiveness of the pages. The compiler has done a good work which will certainly stimulate nature study among the children for whom it was intended. L. J.

Discovery of the Breeding Area of Kirtland's Warbler. By Norman A. Wood. From Bull. Mich. Ornith. Club, Vol. V, pp. 3-13, March, 1904.

This interesting account of the uncovering of the last warbler mystery is accompanied by four half-tones of nests and typical conditions of breeding, and a half-tone of the only egg found. Mr. Wood has here given us really more information about this rare bird, whose nesting was unknown until he discovered it, than we have of several other warblers. He has also given us careful and numerous illustrations of the song as heard in the breeding grounds. It is interesting to notice that none of the songs which he has transcribed for us resemble that which the writer listened to for a full half hour in Oberlin (see Wilson Bulletin, No. 32, page 2, July, 1900.) We can only hope that collectors will respect the rights of these birds to life, liberty and the pursuit of

happiness instead of rushing in and causing their extermination.

L. J.

The Migration Route of Kirtland's Warbler. By Chas. C. Adams. Bull Mich. Ornith. Club, Vol. V, pp. 14-21, March, 1904.

This second contribution to the life history of *kirtlandi*, an attempt to determine its route of travel from the Bermudas, its winter home, to its known breeding range in Michigan, is well timed. It is accompanied by a like study of the migration route of the Prothonotary Warbler, both being illustrated by maps. This discussion is necessarily limited to the known occurrences of the bird, and from the data at hand its route of migration seems to be from its winter home westward to the Mississippi river, thence north to the mouth of the Ohio, one branch continuing up the Mississippi to St. Paul, on its course giving off branches at the Illinois river, the birds reaching southern Michigan by skirting the southern end of Lake Michigan, and another branch entering northern Illinois. The Ohio offshoot again divides, one course being up the Ohio to Cincinnati, the other up the Wabash to northern Indiana and northern Ohio and eastern Michigan, there following the course of Lake Huron to Mackinac. The course thus pursued almost exactly corresponds to the post-glacial drainage of the regions covered. No doubt the birds pass further up the Ohio and finally cross to Lake Erie by one of the main tributaries, possibly the Muskingum or Scioto. Now that this bird has been brought so prominently before us there should be additional records of migrating birds.

L. J.

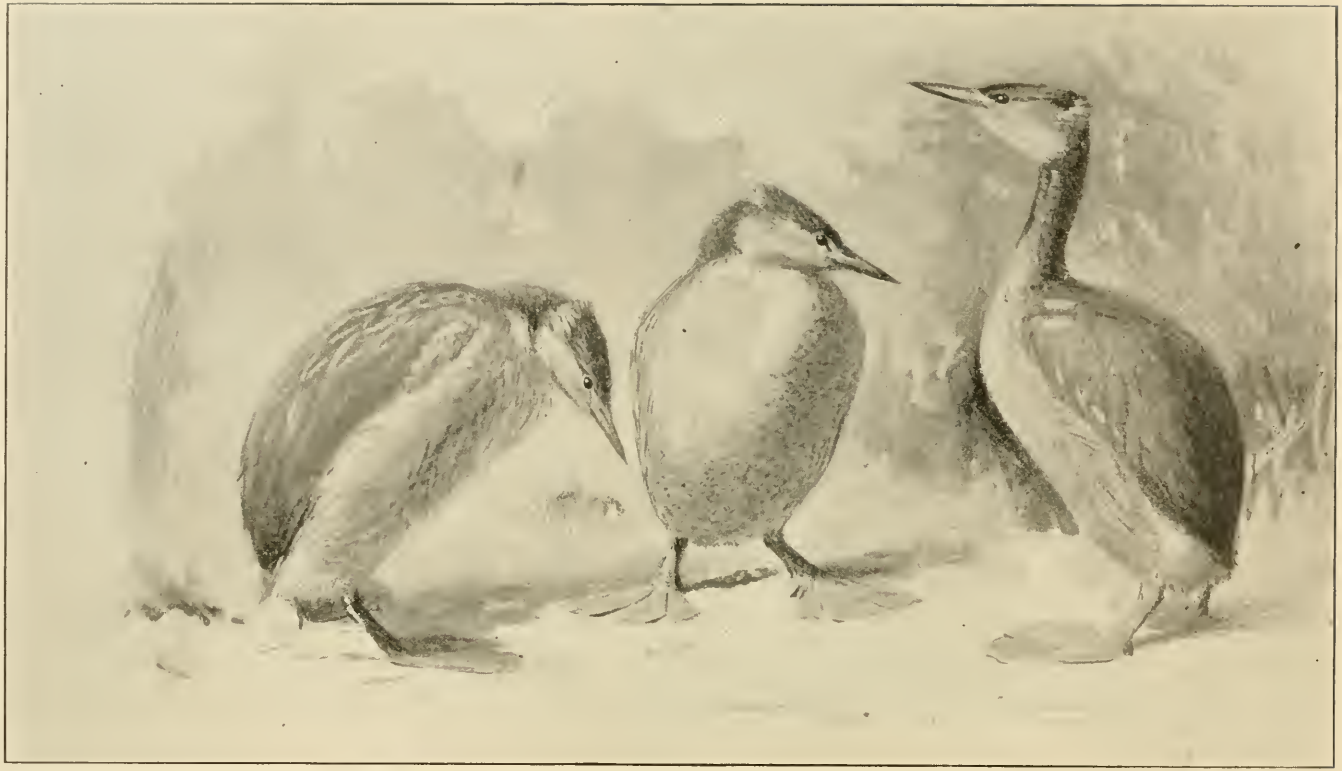
Unpublished Letters of John James Audubon and Spencer F. Baird. By Ruthven Deane. From "The Auk," Vol. XXI, No. 2, April, 1904.

This paper consists of a letter from Baird to Audubon, and Audubon's reply, concerning Audubon's proposed western trip, and a recommendation of Baird to a position in the "National Institute," by Audubon. These letters give us a hint of the esteem in which Audubon, then sixty-two years old, held Baird, then but nineteen. L. J.

Warbler Songs and Notes. By G. Eifrig. Reprinted from the Ottawa Naturalist, Vol. XVIII, 1904.

This paper is given to brief descriptions of the songs of 22 of the warblers which visit the region of Ottawa. L. J.

Amateur Sportsman, The Vol. XXX, Nos. 5, 6, Vol. XXXI, Nos. 1, 2
American Ornithology, Vol. IV, Nos. 4, 5.
Atlantic Slope Naturalist, The, Vol. I, No. 6.
Bird-Lore, Vol. VI, No. 3.
Condor, The, Vol. VI, Nos 2, 3.
Journal of the Maine Ornithological Society, The, Vol. VI, No. 2.
Maine Sportsman, The, Vol. 11, Nos. 127, 128, 129.
Monthly Bulletin, The, of the Division of Zoology, Pa. State Dept. Agri., Vol. I, Nos. 4. 11-12, Vol II, No. 1.
Naturaliste Canadien, Le, Vol. XXXI, Nos. 2, 3.
Ohio Naturalist, The, Vol. IV, Nos. 5, 6, 7.



HOLBŒLL GREBE (*Colymbus holbœllii*) IN CHARACTERISTIC ATTITUDES

THE

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NOTES ON THE HOLBOELL GREBE

(*Colymbus holbœllii*)

BY ROBERT J. SIM.

Learning of the capture of a Holboell Grebe near Ashtabula, O., I set out on the first opportunity—Feb. 21, 1904—to see if I could procure the bird. I found it in the possession of Mr. J. J. Topper of Plymouth. This man said that the bird had been seen in the neighborhood for about a week when he took it in thinking to prevent it from starving. It seemed to have come down to a pond near by which was covered with a sheet of "glary" ice, and was unable to rise. Judging from the tracks in the snow as Mr. Topper said, the bird had been trying to reach some wild rose hips that still clung to the bushes. Before the grebe came into my possession strips of fresh fish and raw oysters had been offered it to no purpose, but a little piece of bread had been forced down its throat. This must have been about all the nourishment the bird had had for nearly two weeks. I found it exceedingly thin but able to run about. Bringing it home I kept it in a room where we saw much of each other every day. On the third day of May it was liberated on a small clear pond near Mills Creek, west of Jefferson. Thus it will be seen that this bird was kept in confinement for over two months, during which time opportunity for considerable study was afforded. Below its various occupations and actions are described as closely as my notes allow.

FOOD, FEEDING AND DRINKING.

On the first day strips of raw meat and fresh lettuce were placed in a dish of water before the grebe. These were poked tentatively, then fished out onto the floor, but not eaten. The bird seemed inclined to flop himself into the dish. Towards night two small pellets of raw beef steak were forced down his throat. On the second day I placed a four inch wild fish (shiner?) in a dish filled with water. This was set on the floor in front of the bird. He gave the fish a slight poke whereupon it swam around violently. Making a quick thrust he caught it, grasping it crosswise with the bill—not impaling it. The fish then went through a course of pinching from head to tail, being hitched along from side to side in the bill. It was then turned about and gulped down head first. Later in the day three out of four strips of raw white-fish were eaten, each about the size of a man's finger. These the grebe bruised and shook until small fragments flew several feet around. At this time of the year live food was scarce, but we succeeded in finding a few small aquatic animals. By the twenty-seventh of February the grebe had eaten—all voluntarily—the following:

10 live gold fish—2 to 5 inches long.
2 pieces raw steak (taken from water).
1 four-inch wild fish.
2 large tad-poles.
7 medium sized dragon-fly larvæ.

In swallowing the large gold-fishes the birds jaws seemed to be distended laterally and he gulped so violently that the back of his head struck his back with a hollow "tunking" sound. This operation apparently jarred the fish past the sticking point. When very hungry the grebe swallowed the fishes alive. Of the cray fishes offered him only the small or soft ones were eaten, and no great relish was shown. Earthworms, when their season came, were eaten with avidity, but raw beef-steak (lean) was the principal article of diet with the bird during his stay with us. This came to be taken from the hand, the floor, or water indifferently. In swallowing food the grebe always threw his head outside the normal in violent gulpings, in this respect, as in most, differing from a contemporary coot captive which drew the food into his

throat simply by movements of the tongue and jaws. Unless the diver had already been filled up he invariably ate all the earth-worms and beetles which were placed in the coot's dish.

Only once did the bird really drink, I believe. This was on the first day of our companionship when I put him into a small tank of water. On this occasion he drank eagerly, immersing the bill for an instant, then tipping the head back after the manner of most birds, and repeating this many times.

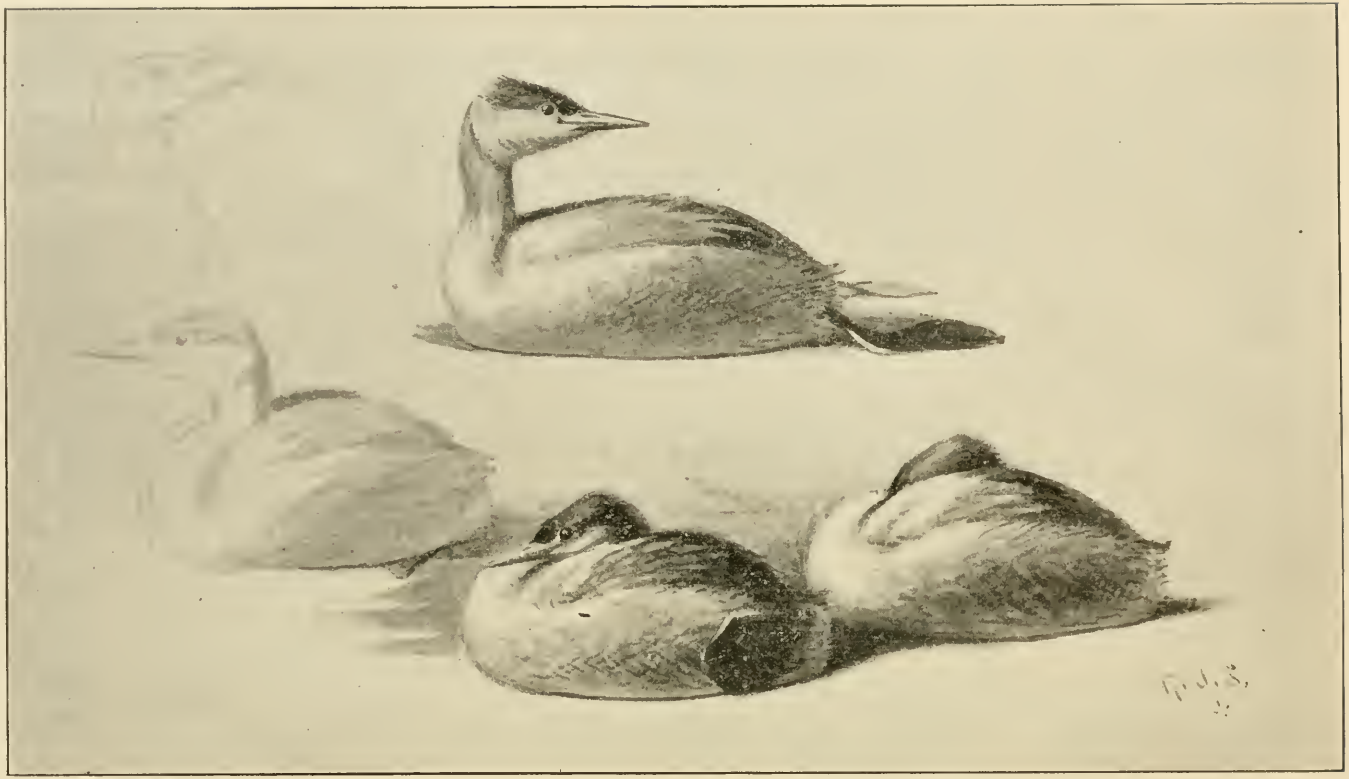
BATHING AND PREENING

It seems strange that a water-bird should be so indifferent to his natural element. When placed in a tank of clear water, warm or cold, our bird became very wet and soon tried to jump out. After his bath he looked snakey, so closely did the wet feathers adhere to his slender body. I do not think, however, that the under-lying down became much wet ; for the bird usually managed to dry himself in an hour or two. A regular bath, such as he took at once after being released, consisted of much water treading, plunging and flapping. In fact the feathers could scarcely be raised one from another they were so completely soaked.

In drying and replacing the feathers the bill was thrust, open into the plumage, then closed and flicked outward, sending drops of water in all directions. The bill was worked over every part of the plumage except, of course, that of the head, and this was rubbed vigorously on the back and wings; or was scratched with the middle-toe nail of the rapidly vibrating foot. When I gently scratched or rubbed the back or sides of the grebe's head he immediately rubbed his head on his back as though the sensation that my scratching caused suggested his own method of producing it. When the bird's back was scratched no such movements were observed. In preening the feathers of the breast and belly he would stand nearly erect on his toes, retaining this position for several seconds, then would step along so as to rest on a dry spot. Often the bird stood up vigorously and frankly, flopping his wings for several seconds at a time. I say frankly because in contrast the coot had a timid, furtive way of doing it.

SLEEPING.

The grebe slept from dark until dawn, and generally for about an hour after a hearty meal. In roosting he ordinarily



HOLBŒLL GREBE (*Colymbus holbœllii*) GOING TO SLEEP

lay on his keel, his feet projecting behind. As the bird became sleepy the feathers gradually fluffed out and the head settled down upon the back. Soon one foot would be seen to twitch slightly. This twitching and curling up of the toes would increase in violence until, with a preliminary rapid waving movement the foot was tucked under the wing which in turn was quickly covered with the flank feathers. Then the other foot was similarly hidden. Thus the feet were entirely concealed beneath the wings and feathers, not even the heel-joints showing.

While in this position the bird allowed me to lay back the feathers and then gently raise the wing. The flat, flipper-like foot was found to lie at full length against the warm, down-covered side of the body, the toes reaching nearly to the "arm-pit." After tucking his feet away one by one, he would draw his head far back and with a peculiar wagging motion, settle it amongst the feathers of the back. With this movement the bill was thrust quite out of sight among the feathers on either side of the neck, more commonly on the right side.

NOTES.

Early in the morning what seemed to be the song was heard. It consisted of a series of cough-like notes "*Cah*..... *Cah*.....*Cah*" the bird would say, shaking his head in a most painful manner. This song, if it could be called such, was given four or five times at dawn, and each consisted of four or five of the coughs. When frightened into a desire to inspire fear the grebe opened his mouth very wide (by moving both halves) and gave a rather loud scream which became grating, like the crow's song, towards the end. It somewhat resembled a whinner though, of course, was not so loud. A much more pleasing note than either of the above may be suggested by the syllables, "*Wit-'tah*,"—not loud but rather high, the first part being higher than the second. It was usually given when the bird had just taken wing exercise, or had waddled across the room. It was often given, too, when the bird's back was stroked.

SWIMMING AND DIVING.

In swimming he sat rather deep, the tail and heels usually being submerged. At all times when folded the wings were

quite concealed under the side and flank feathers and humerals. In ordinary swimming the feet struck out alternately. The tarsi extended downward and outward. In diving the bird was not observed to spring forward in the common grebe manner, but rather let himself down very quickly as though drawing his head back through a hole. When it was below the surface I could scarcely realize that the creature before me was a bird, so slender was he and so swiftly did he dart about and shoot through the tangle of aquatic vegetation. It was amazing. The wings were entirely covered by the feathers and the feet struck out simultaneously at the sides, far astern. Their movements could scarcely be followed.

STANDING AND WALKING.

Contrary to the common belief in regard to grebes, this individual was never seen to rest upon his heels, though observed untiringly. The ordinary standing position was with the body somewhat inclined forward, the shoulders humped up, and the tarsi descending forward and outward on a slant—and so entirely free from the ground. The bird could stand for nearly a quarter of a minute or run ten or twelve feet before dropping to his breast. While vigorously preening or jabbing at his feathers he would sway around and sometimes had to take a step or two to regain balance. He seemed to become fatigued after standing for a moment, the strain being felt most, I think, in the toe-joints and in the muscles and tendons which flex the digits; for even with the tarsus slopping back as it did (see sketch) the toes were necessarily pressed upward to an unnatural degree. This conclusion was strengthened by the fact that the toe-joints became much swollen and developed corn-like protuberances. In pattering rapidly along the bird held his body in a semi-erect attitude and it swayed but little, on account of the quickness of the steps; but when walking slowly along he swung noticeably to the side whose leg for the moment supported his weight. He sometimes took food from the floor without first lying down, though he usually assumed the ventropodal position when feeding. When going under chairs and other low articles the bird progressed in short leaps, giving a spring with both legs together and coming down on his breast.

CURIOSITY, FEAR, ETC.

When curiosity and suspicion were aroused the bird's neck was upstretched very slim and the feathers of the body, too, were pressed close. The feet were drawn up under the body at the sides ready for a leap. The suspicious object was regarded intently with one eye at a time. When frightened and disturbed the bird either ran and tumbled to the darkest corner, or defended himself by delivering powerful blows with the nearly closed bill. During the first few days the bird bit me so often and so viciously that my hands were covered with scratches; but thereafter learned that it was useless to try to intimidate me thus. When the coot was let loose in the grebe's room a fight soon took place in which the gray fellow silently bit and scratched with bill and nail, while the grebe sat raining blows with his spear like bill. Their wings were raised threatingly but, I think, not used. Fearing that one might hack the other "into pieces small" I parted them and no more trouble followed during their week of companionship.

COLOR, SENSE, MEMORY, ETC.

During the first few days of the grebe's stay with us we fed him gold-fish which were taken from a dish by the use of a small net made of white mosquito bar. Soon, however, when the bird saw me pick up the net, he hurried over expecting, apparently, to see a gleaming fish drop out. And the moment I even drew a white handkerchief from my pocket he came toddling up with outstreched neck, eagerly watching every movement. Thus I could amuse my friends by making our pet come to calls or signals which, by themselves, would have no effect whatever.

A gray overcoat or a long yellowish gray smock had no terrors for the grebe, but let me enter the room with a broad brimmed gray hat or a scarlet or black skull cap on my head and he would make for the darkest corner. A dark red gown worn by my sister had a similar effect, though most dresses did not frighten him.

He would rest on the hand or lie contentedly on my knee as long as allowed to do so, or would climb onto my foot and let me raise him up on it. But all this was changed the moment that the bird was liberated. He swam at once to the farther side of the pond, and do what I would he would not

return nor could I approach within many feet of him. He was just as shy as any wild grebe and paid no attention to pieces of meat tossed out to him. He saw me then as he has seen men before. I was no longer the great mass standing over him. One is reminded of the little girl at the menagerie who couldn't see the elephant. There he was towering up before her; but he was so big that she could make nothing of him, so she still asked, "Where is the elephant?"

AN ORNITHOLOGICAL RECONNOISSANCE OF THE GRAND RESERVOIR, OHIO, IN 1904.

BY W. F. HENNINGER

The fact that in former years the Grand Reservoir, in Mercer and Auglaize counties, Ohio, was an interesting place for birds, as also that in Dawson's recent investigations it received but scant attention, induced Mr. Karl Heilmann, of Tiffin, and myself to take a summer trip to the Reservoir, to find out what the conditions of bird life would be at the present time. Along the northern side of the Reservoir is the pike from St. Marys to Celina, the tracks of the Lake Erie & Western R. R. and the Western Ohio Traction Co. It is obvious that this part of the Reservoir showed nothing of interest concerning birds. The western part from Celina to the southeast showed us one interesting species, the Yellow-bellied Sapsucker, for the finding of this bird at this time of the year would tend to strengthen Mr. Oberholser's only breeding record for this species in the state. The basis of our work and supplies was Montezuma, on the southwest end of the Reservoir, a quiet little village, the monotony of which is changed only by the advent of a stranger, or an occasional dog fight in which most of the citizens participate with great glee. There we heard that the oil wells in the Reservoir had driven the nesting birds out quicker than anything else.

The Cormorants had ceased to nest since 1886, the Gadwall even before that. One of the natives told me he had not seen a young duck for the last four years, though Mallards and Blue-winged Teal were supposed to nest there still. This did

not seem very encouraging and the first day on the water, which was higher than for the last 13 years, only confirmed this. We saw great numbers of the Great Blue Heron, flocks of 18 and 25, and one Coot, the only one seen on the trip, and one bird which by elimination we thought to be the Sandhill Crane, but identification was not as satisfactory as it should have been. As soon as we reached the oil derricks bird life was extinct.

We rowed back in a fierce gale and concluded to start out bright and early the next morning on the pike to St. Marys. So 6 a. m., July 2, found us out on the road with hip boots, gun and camera. After walking nine miles to the east we turned off to the Reservoir, and three miles east of the oil wells struck a place which was promising. The trees fringing the Reservoir were standing in about three feet of water, mostly willows, water ash and a few oaks. With their green arches they were keeping almost every ray of sunlight away from the oozy recesses beneath. Spotted Sandpipers and Redstarts were common and in a few moments I saw a female of the Prothonotary Warbler, which we observed for about five minutes. Later on in a similar place we saw another female of the same species. This would indicate that it is still a very rare summer resident at the Reservoir. The call note, to my ear, faintly resembled the chirp of the Yellow Warbler, while the colors in general, setting aside the size, would remind one of the Blue-winged Warbler minus the wing bars.

In this shady retreat we also found the Chestnut-sided Warbler in several specimens. Most likely they had bred in the neighborhood. Rowing across a space of open water we soon entered a dense swampy margin and here was the only place where the Long-billed Marsh Wren could be found, and then sparingly only, not to be compared with the vast numbers at the Sandusky Bay marshes. Bitterns were booming plentifully, but the Least Bittern was not there. Gallinules and Rails were also absent, while a Wapakoneta sportsman, who is also a practical taxidermist, had found a nest of the King Rail on the previous week off Russell's Point at the Lewiston Reservoir. After poking around in the cat-tails for a while, we suddenly started a female Blue-winged Teal, but in spite of a very diligent search, we did not find the nest. The

bird was in an excellent condition and flew rapidly away, proving that she was in no way a crippled bird. Evidently the Blue-winged Teal is a rare summer resident at the Grand Reservoir. No other water birds were seen. Tree Swallows and Martins were very common and I am surprised to see how commonly, in northern Ohio, the Purple Martin takes to the woods and swamps to nest, and how rare comparatively the species is, while in southern Ohio, it is hardly ever seen away from the bird houses and is a common bird. The ordinary Ohio land birds were all common at the Reservoir with the exception of the House Wren, which was rather rare. All told 67 species of birds were heard or seen.

It certainly does not pay an ornithologist to make a visit to the Grand Reservoir, except in the migration seasons, the Licking Reservoir no doubt being the most profitable inland body of water in Ohio. The interesting things which Mr. Dury found at the Grand Reservoir in former years are gone for good, and after coming to this conclusion we wearily tramped the nine miles back to Montezuma, packed our grips and went home.

JULY FOURTH CENSO-HORIZONS, 1904.

Judging from the writer's experience, the Independence Day bird work was far less interesting and inspiring than the May migration work, and it was entered into with that lack of enthusiasm which summer heat is pretty certain to bring about. However, the work actually done proves that there is, after all work to be done in summer which will count quite as much as the May work in the final result. Heat, foliage, and last but not least, insects, make bird study in summer irksome. Take away the annoyance of the insects and I venture to assert that the present hesitancy about going into the woods in July would give place to commendable enthusiasm. Let us hope that so much of the millennial time will soon come.

The reports which have been received cover a pretty wide range of country, but are not as well scattered as the May reports. They are interesting in disclosing what are in the breeding birds of the several regions. One would suppose that a

larger number of breeding birds might easily be found in each of the regions represented.

The regions from which reports have been received, begining in the extreme east, follow:

WOODS HOLE, MASS. R. L. Baird, I. A. Field, and Lynds Jones. 5 to 7 and 8 to 12 a. m., 1 to 5 p. m. Mainland in the morning, Nonamesset Island and the surrounding water the latter part of the morning and afternoon. Little work done after dinner hour. Weather fair.

CROSSWICK, N. J. Charles H. Rogers. First hunt 5:50 to 8 then 9:25 to 5:05. Weather fine. From Crosswick through Yardville to and around Laurie's Pond and return.

ENGLEWOOD, N. J. George E. Hix. Mostly damp woods and extensive marsh; no fields or orchards and only about a mile of road. 7:15 a. m. to 6:55 p. m. Weather fine.

CANANDAIGUA, N. Y., AND VICINITY. Frank T. Antes. 4:30 a. m to 5 p. m. on July 4th; 8 to 10 a. m. on July 5th. Village of Canandaigua, five miles of lake shore, a marsh at the foot of the lake, and a small tract of woodland about seven miles up the lake. Weather fine.

GRASMERE RHINEBECK, N. Y. Clinton G. Abbott and Maunsell S. Crosby. 6 to 8 and 9 to 10 a. m. Area covered about 150 acres. Fine day.

CUPOLA, WELSH MOUNTAIN, CHESTER COUNTY, PA. Thos. D. Keim and Chreswell J. Hunt. 5 a. m. to 7 p. m. Distance covered over 15 miles. Weather Fine.

GENEVA, O. A. W. Galpin and Robert J. Sim. Cowles Creek marsh and lake shore. 4:30 to 12 a. m. Hot day, partly clear, becoming rainy p. m. 20 acres in the marsh, and woods and thickets near.

WATERFORD, OAKLAND COUNTY, MICH. Alexander W. Blain, Jr. 9 a. m. to 7:30 p. m. Warm day, showers in p. m. In Woods, fields, meadows, marshes, streets of town, along railroad tract, and along the lakes.

HOPE, KANS. O. H. Pease. 1 to 2:40 p. m. Heavy rain the night before, day warm, partly cloudy and sultry. A small grove and hedge fence. Distance about 1½ miles.

	Woods Hole, Mass. Baird, Field, Jones	Crosswick, N. J. C. H Rogers	Englewood, N. J. Geo. E. Hix	Canandaigua, N. Y. F. T. Antes	Grassmere, Rhinebeck, N. Y. Abbot, Crosby	Cupola, Pa. Keim, Hunt	Geneva, O., Galpin, Sim	Waterford, Mich. A. W. Blain, Jr.	Hope, Kans. O. H. Pease	
Loon	8							2		
Herring Gull	2									
Laughing Gull	2									
Common Tern	c									
Roseate Tern	c									
Mallard								5		
Wood Duck							1			
American Bittern				x						
Broad-winged Hawk	1									
Least Bittern							2		2	
Great Blue Heron						2		1		
Green Heron	2	3			x	3		1		
Blk-crowned Night Heron					x	1				
American Woodcock								1		
Spotted Sandpiper	4			x	x		4	6		
Bartramian Sandpiper						2				
Killdeer		1		x		8	3	4		
Bob-white		1			x			1		1
Ruffed Grouse								1		
Mourning Dove		2		x	x	1		2		15
Turkey Vulture		5				4				
Marsh Hawk								1		
Sharp-shinned Hawk				x						
Red-tailed Hawk								1		
Red shouldered Hawk					x					
White-winged Scoter	1									
Am. Sparrow Hawk		6					2			
Screech Owl										2
Yellow-billed Cuckoo		1	1			3		1		
Belted Kingfisher	3	4		x	x	1	2	1		
Hairy Woodpecker		2			x	1		1		
Downy Woodpecker		6	1		x	3		3		
Red-headed Woodpecker						4	3	2		
Northern Flicker	4	17	1	x	x	8	5	6		8
Whip-poor-will								1		
Nighthawk										
Chimney Swift	10	40	4	x	x	c	10	15		
Ruby-throat Hum'gbird	3				x	1		1		

Kingbird	5	7	1	x	x	5	6	10	19
Crested Flycatcher		4	2	x	x		1	3	
Phoebe		1	1	x	x	5	2	6	
Wood Pewee	10	5		x	x	3	3	5	
Green-crested Flycatcher		2	1			1			
Least Flycatcher				x					
Prairie Horned Lark							2	10	
Blue Jay		2	1		x	7		1	2
American Crow	c	8	6	x	x	c	9	20	
Starling			1						
Bobolink			1	x	x			30	
Cowbird	4	4	4	x	x			8	2
Red-winged Blackbird	c	1	11	x	x	c	20	c	
Meadowlark	2	19		x	x	c		a	
Western Meadowlark									8
Orchard Oriole		4			x	4		1	7
Baltimore Oriole	3		1	x	x	1		2	11
Purple Grackle		x	1		x	c			
Bronzed Grackle	c			x				10	c
Purple Finch				x					
American Goldfinch	5	2		x	x	8	3	c	1
Vesper Sparrow	10	1	1	x	x	a	3	4	
Savanna Sparrow				x	x				
Grasshopper Sparrow					x	9		1	
Lark Sparrow									
Chipping Sparrow	10	22	4	x	x	3	1	c	
Field Sparrow	4	5	3	x	x	c	4		
Song Sparrow	c	25	35	x	x	c	11	a	
Swamp Sparrow		2	9						
Towhee	c	3	1		x	13		2	
Cardinal		1				1			
Rose-breasted Grosbeek		2	2		x			1	
Indigo Bunting	2	2	4	x	x	5	3	5	
Dickcissel									15
Scarlet Tanager		2	1	x	x	4	1	1	
Purple Martin		1		x		4		c	2
Cliff Swallow	1							10	
Barn Swallow	c	12	2	x	x	11	5	a	5
Tree Swallow	2		3					4	
Rough-winged Swallow		4		x		6		2	
Cedar Waxwing	c		6	x	x		1	8	
Migrant Shrike								1	
Red-eyed Vireo	c	17	14	x	x	c	5	2	
Warbling Vireo		1		x	x			5	
Yellow-throated Viero		4		x	x				
White-eyed Vireo		3				3			
Bell's Vireo									2
Black and White Warbler	2	2		x	x				

Worm-eating Warbler	...	....	1	..	x	2	..	...	....	
Golden-winged Warbler	...	....	....	..	x	....	..	...	....	
Yellow Warbler	c	5	3	x	x	1	1	...	....	5
Chestnut-sided Warbler	c	...	1	..	x	2	..	...	....	
Prairie Warbler	c	...	....	..	....	..	..	...	....	
Blk-throat green warbler	c	...	....	..	....	..	..	...	....	
Northern Parula Warbler	1	...	....	..	....	..	..	...	....	
Kentucky Warbler	...	....	2	..	....	..	..	...	....	
Oven-bird	c	3	9	x	x	6	..	...	1	....
Louisiana Water-Thrush	...	....	2	x	x	....	..	...	....	
Northern Yellow-throat	c	5	9	..	x	c	..	3	...	....
Yellow-breasted Chat	1	...	1	..	....	6	..	1	...	....
American Redstart	2	...	4	x	x	....	..	...	4	....
Mockingbird	...	....	....	..	....	..	..	...	....	1
Catbird	c	12	11	x	x	....	c	..	3	... 2 12
Brown Thrasher	c	... 4	....	..	x	....	4	..	1	... 1 15
House Wren	...	4	....	..	x	....	7	..	...	1 3
Long-billed Marsh Wren	...	....	8	x	..	....	..	2	...	1 ....
White breasted Nuthatch	...	1	....	8	x	..	x	....	..	1 ... .
Tufted Titmouse	...	5	....	....	..	....	1	..	...	....
Chickadee	6	...	....	....	x	..	x	....	..	... 3 ....
Carolina Chickadee	...	2	....	....	..	....	..	..	...	....
Blue-gray Gnatcatcher	...	....	....	....	..	....	..	..	...	c ....
Wood Thrush	...	3	....	2	....	..	x	....	4	.. ... 5 ....
Wilson Thrush	3	...	....	1	....	x	..	x	....	.. ..
American Robin	c	35	....	20	....	x	..	x	....	c .. 10 ... 5 3
Bluebird	4	...	3	....	3	....	x	..	x	.... 2 .. 4 ... 5 1
Hooded Warbler	...	....	9	....	..	....	3	..	...	....

SPRING MIGRATION ALONG LAKE ERIE'S SHORE.

BY ROBERT J. SIM.

While I was staying along the shore of Lake Erie near Geneva, Ohio, last May (1904) I was much interested in noting the diurnal flights of birds, which, the longshoremen assured me, occur every year. These flights took place on several fine days before the middle of the month. I made observation only on days when the movement was not conspicuous, that is, on May 7th, 12th and 13th. The weather was warm, the sky cloudless but hazy, and a rather strong south breeze was felt.

The birds were all passing from west to east in a belt about one-fourth of a mile in width, the main body passing along over the beach. For the most part these flights were

over before noon, and the earlier part of the morning seemed to be the favorite time. My notes are not complete because the flights were noticed a day or two before any records were kept, and because I had other bird work in hand and could not attend strictly to the migrators.

The *Raptores* were well represented. Those which I shall call *Buteo* were not identified with absolute certainty though I should feel little hesitancy in calling them American Rough-legs. They were all of the same species. The size was that of the Red-shoulder or a trifle greater. The plumage above seemed to be rather dark, and below the birds were whitish with a dusky band varying in width and distinctness across the belly. The tails all appeared like that of a young Red-tail—that is, rather finely barred with dark and light. None of these birds stopped, but the Sharp-shins often did so, alighting among the trees and causing great disturbance among the small birds. Some of these small hawks had their crops vastly distended. Most of them were carefully looked at through an 8-power prism glass and were found with one exception to be in the brown, immature plumage. The Ospreys flew low, sometimes alighting on one of the trees along the bank. They varied much in the completeness of the necklace.

The Blue Jays flew just above the top of the trees, sometimes stopping for a moment in them. One flock stopped in an oak tree to feed. Nineteen seemed to be a favorite number for a flock, but they ranged from single birds to a flock of thirty. The flocks trailed out sometimes being in all a hundred yards long. These jays were absolutely silent except in the cases of stray ones.

Below I give the species of birds, with the number seen, and the dates.

	MAY 7	MAY 12	MAY 13
Marsh Hawk	3		
Sharp-shinned Hawk	72	24	5
Cooper Hawk	2		
Buteo	18		
Am. Sparrow Hawk	2	1	1
Am. Osprey	5	1	
Kingbird	13		
Bluejay	120	few	148

Am. Goldfinch..... 10.....3 small flocks.....
Am. Pipit.....200.....3 flocks..... .....3 flocks

On the 12th there was a conspicuous movement of swifts and swallows. They flew mostly in the fore part of the morning and towards night, going east. In the morning every one or two minutes a small company went by. In proportion they were as below:—

Bank Swallow by far the most; Barn Swallow 2nd; Chimney Swift 3rd; Cliff Swallow 4th; Tree Swallow 5th; Rough-winged seldom.

In the afternoon the flight continued from 3 to 6:30 p. m. Every two or three minutes a scattered, feeding flock of 20 to 50 passed along. Species as follows:

Cliff Swallow predominating: Barn Swallow 2nd; Swift 3rd; Bank Swallow 4th and an occasional Tree Swallow.

ADDITIONS TO LIST OF THE WINTER BIRDS OF WAYNE COUNTY, MICH.

BY BRADSHAW H. SWALES.

Since the publication of my list of the Winter Birds of Wayne county, Michigan, in THE WILSON BULLETIN, March, 1903, I have been able to add the following to the list of 61 species above recorded.

62. LARUS ARGENTATUS. Herring Gull. Accidentally omitted. A common winter resident going north in late March.

63. LARUS MARINUS. Black-backed Gull. Reported to be occasionally taken at the Flats in winter. One shot on the Detroit river during March, 1904, and sent in to a local taxidermist.

64. LOPHODYTES CUCULLATUS. Hooded Merganser. I observed a male December 3, 1903, at Belle Isle. Another was sent in later in the month to L. J. Eppinger.

65. CHARITONETTA ALBEOLA. Bufflehead. I noticed one bird at L. J. Eppinger's which was shot on the Detroit river in December, 1903.

66. ANAS BOSCHAS. Mallard. A number were taken during December, 1903, on the Detroit river.

67. ANAS OBSCURA. Black Duck. Several observed February 3, 1903, on the lower part of the Detroit river.

68. NETTION CAROLINENSIS. Green-winged Teal. A late bird was shot in early December, 1903, off Fighting Island, by F. Bryant.

69. ACCIPITER ATRICAPILLUS. American Goshawk. J. B. Purdy records a bird shot December 24, near Plymouth. (Bull. Mich. Ornith. Club, II, 38.)

70. CERLYLE ALYCON. Belted Kingfisher. Chas. Freiburger records one January 14, 1903, at the Detroit Water Works. (Bull. Mich. Ornith. Club, IV, 28.)

71. PINICOLA ENUCLEATOR LEUCURA. Canadian Pine Grosbeak. The first birds of this species were recorded in Wayne county, on November 9, 1903, when two birds were shot near Detroit and sent in to L. J. Eppinger. Jas. B. Purdy writes me that he shot one December 9th near Plymouth. On March 6, 1904, I met with two near Palmer Park, north of Detroit.

SOME BARN SWALLOW NESTS.

BY CHRESWELL J. HUNT.

The Barn Swallows shape and vary their clay nests according to the site selected for them. The most common form seems to be that placed on the side of a beam, in which case the nest is usually in the form of a reversed half cone—the top being a half circle while the base is pointed. I also have a nest which was built where a lath projected two inches from the base of the beam. In this case the birds used this lath end for a foundation and built the nest above it. This nest is in the usual shape, the top being a half circle, but the bottom, where it rested upon the lath, is flat instead of pointed. Another nest I have seen was placed in a corner where two boards came together at right angles. It had the usual pointed base but was exceptionally long.

I have had a pair of Barn Swallows under observation for the past four summers. Their nests were built under the barn-yard roof. They first built the nest, above referred to, placed upon the lath. They used this nest for two seasons when I removed it and sawed off the protruding lath. The next year they built a nest upon the beam right beside the

spot where the old one had been. This nest was of the usual pointed shape. Both of these nests were lined with straw—no feathers being used.

This summer (1904) what I believe to be the same pair of birds built a nest on top of a strip of wood about five inches wide. This nest is shaped almost like a Phœbe's, being a high circular nest. The centre of this nest was made almost entirely of feathers into which the eggs sank and were almost hidden from view. While the female sat upon the nest laying an egg the male would always be perched upon a near-by stick, apparently on guard.

It is a wonder these birds selected this place for a nesting site as it is just above a door where people are passing every little while all day long. In constructing this nest the birds made themselves just about twice as much work as they would have had building one of the half cone style. As I believe they were successful in rearing all their former broods this new style of nest was hardly built for more protection. Whether it is less arduous for them to build a nest on a solid foundation than to fasten it to the side of a beam I am unable to say. At any rate this circular nest took just about double the material for its construction.

LAWRENCE WARBLER (*Helminthophila lawrencei*) BREEDING IN BRONX PARK, NEW YORK CITY.

BY GEORGE E. HIX.

On May 18, Dr. Wm. Wiegman found a typical male Lawrence Warbler (*Helminthophila lawrencei*) mating with a female Blue-winged Warbler (*H. pinus*). At that time they were collecting material but the nest was not found until after the young, six in number, were hatched. I first saw Lawrence on the 11th of June. At that time the young had apparently been hatched a couple of days. On the 17th the nest was empty, but contained fresh excrement. When last seen there was nothing to show whether the young birds would be typi-

cal *pinus* or tend toward *lawrencei*. This of course could not be determined until the juvenile plumage had been moulted and the first winter plumage assumed. The two songs heard were both different from that of the Blue-winged Warbler, being somewhat between that and the Golden-winged.

AN ADDITION TO THE BIRDS OF OHIO

BY LYNDS JONES.

Mr. W. E. Clyde Todd calls my attention to a record which entirely escaped my notice when compiling my 'Revised Catalogue of the Birds of Ohio'. The published note follows.

'Smith's Longspur in Ohio.

By Clark P. Streator.

Smith's Longspur (Calcarious pictus) Collected at Garretsville, Ohio, on Jan. 29,'88. I observed a large flock of strange birds busily engaged in feeding upon the seeds of ragweed. They would only stay a moment in a place and were very shy, but I was lucky enough to secure two very fine specimens. I belive this to be the first time this species has been taken in Ohio'. Ornithologist and Oologist, 13, page 95.''

This species should be added to the list of Accidendal species in the Revised Catalogue.

ALL DAY WITH THE BIRDS.

This may seem an inopportune time for discussing a subject which has special reference to an all day study of the birds during the height of the spring migrations. It is certainly true that this all day habit grew out of a special effort put forth to determine as nearly as possible what and how many species of birds might be found in a limited region in one day, but it has long outgrown merely that. These spring migration all day studies proved so valuable in many ways that entire days were given in other seasons to the

same sort of study, with no less interesting and valuable results. Some of my friends are making monthly records of the birds, planning at least four all day studies during each month. Some, with less opportunity for study, are making seasonal lists, based primarily upon three all day studies, one at the begining, one at the middle and one at the close of the season, supplemented by such records as may be made during the intervals. It is clear that the person who can spend a considerable time with the birds during each month will have at command monthly, seasonal and annual lists. In making any seasonal divisions one must largely disregard the calendar seasons and group the birds according to whether they are resident during the year, whether they are seen only during the winter months, or winter weather, or more exactly, whether they come from the north and spend the winter, whether they are transient visitors, passing the region twice each year, or whether they come from the south, breed and pass south again. Careful study will always disclose the group to which each species belongs during a series of years.

If we would understand geographical distribution, local and general, fully, a considerable time must be spent with the birds at all seasons. While the mapping of areas of distribution of birds must be based upon breeding birds, because it is during the breeding season that they are really settled for a time, while at other times they are wandering about to a greater or lesser extent, their distribution during the winter season is no less interesting, and capable of throwing light upon some of the problems of summer distribution. The routes of migration must also be regarded in the light of geographical distribution, and the mapping of these routes is of more importance in the discussion of the distribution and origin of present day species than many persons think. These remarks apply principally to the question of continent distribution, it is true, but how are we to exactly know about such general distribution unless we begin with local distribution? Hence, the local list becomes of great importance as furnishing the material for such exact knowledge of general distribution. It may not be clear how the all day studies at any particular time bear upon this question of geographical distribution. My answer is that they furnish the means of knowing what

birds are in the region at the time of the study. Ten consecutive hours spent in a study of the birds only once a week will prove of more value in determining what birds inhabit the region than triple that number if scattered over the week in two hour lots, for the simple reason that the ground can be so much more thoroughly covered. The greatest value of the short studies lies in coming in touch with the birds often so they can be learned more readily. But it is one thing to learn the birds and quite another thing to learn what ones inhabit a given region. To you who must spend a considerable time learning the birds the shorter studies will be the more attractive, but once the task of learning is completeed, let the longer studies have a place, for the sake of the local list.

The reader will at once infer that 'All Day' bird studies for times not hitherto indicated will be suggested. At the risk of being considered an 'All Day' crank (might as well be killed for an old sheep as a lamb!) I want to propose to each reader who has become inoculated with this 'All Day' germ some one full day's study in the succeeding months. The earlier in October such a study can be arranged the more birds will be recorded, but any day will be better than none. I would certainly be considered demented if I suggested Thanksgiving day for such activity, but for students and educators, at least, the Saturday following the feast might prove both interesting and healthful. For December your services are already solicited. I would urge that Mr. Chapman be given hearty support in extending his Christmas Bird Census over the whole country. You cannot properly enjoy the day without getting near the heart of Nature.

Another line of study is suggested elsewhere—that of laying more stress upon the fall migrations. It is now too late to note the beginnings of the southward movement by many of the breeding birds, but it is not too late to record the final departure of many species. Plan now to give next year's southward movement proper attention.

SOME NEEDED WORK.

Those who imagine that we are nearing the end of bird study—that there is not much left worth spending time upon—should search through all available bird books for such common things as most phases of breeding habits, the problems of song, most questions relating to food and the manner and times of feeding, the effect of light and wear and age upon color of the feathers. In short, there is nothing yet fully known even in the field of the more evident matters relating to the birds. In the less evident, having to do with mental processes, physiological processes and the like almost nothing has been done. Anyone should be able to throw light upon the questions of nest building, deposition of the eggs, period of incubation, young in the nest and out of it, and anything else relating to the life as revealed in the nesting season. There are doubtless more than a dozen species of birds nesting within your reach every year, and yet it is not a hazardous venture that you are ignorant about all of these suggested questions. Ought you to be? Such work will prove intensely interesting and of great value. It must certainly be within the reach of all who live where trees grow. For such work the birds need not be disturbed to the point of leaving the nest in order to carry on the necessary observations. If the nest is too high to be looked into without climbing too near it and where a step-ladder cannot be used, a small mirror on the end of a stick will often suffice. But if the study taxes your ingenuity, so much the better!

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A Quarterly Magazine Devoted to the Study of Living Birds
Official Organ of the Wilson Ornithological Club

Edited by LYNDS JONES

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EDITORIAL.

The editor will be in Chicago, Ill., from October 1st, until June 25. All communications and publications should be addressed to him at the University of Chicago, Chicago, Ill., between those dates, or until further notice.

The editor spent another delightful summer at Woods Hole, Mass., and the islands in the vicinity, in company with Mr. S. L. Baird and Mr. I. A. Field. Nine days were spent on Muskeget island with Mr. Baird, and the other places of interest to an ornithologist were visited. Many interesting things were learned about the gulls and terns which will be shared with our readers later. A short trip among the lake Erie islands furnished an interesting comparison between the salt water and fresh water Common Terns. Much more consecutive time is needed before the whole history of the terns nesting in either region can be learned.

We hope that many bird students have undertaken a careful study of the autumn migrations, which began more than a month ago. We are now just in the midst of the southward movement, when fall work becomes the most interesting. The most important part of this fall work are the exact records of southward departure, or at least of that part of the work which remains of this season. Record should be kept of both last seen and the departure of the bulk of the species. Very few migration note books contain much information about any phase of the southward movement. Some of us have to be stay-at-homes all summer, and to such must we look for complete records of the southward movement.

We are pleased to note that Mr. Frank M. Chapman, the best known writer on birds at the present time, has undertaken the task of collecting a complete life history of our warblers by the co-operative methods upon which our Club was founded. Let every member of this Club and every reader of this BULLETIN aid him in his good work to the full extent of your ability. There are possibilities in this field almost beyond conception if all who can will lend their aid. One great part of our work as a Club has been in raising up a generation of bird lovers who would know how to study the birds for furthering our knowledge of them. Now that an opportunity offers let us show Mr. Chapman that our efforts have been productive.

We are also pleased to note that SCIENCE, for August 26, announces the establishment of 'A Station for the Study of Bird Life' by Mr. Charles C. Worthington, at Shawnee, Monroe county, Pennsylvania, with Mr. William E. D. Scott in charge. Mr. Scott is well known as the Curator of the Department of Ornithology at Princeton University. He has written of his experiment with birds there, particularly in regard to inheritance of song. This station is under the charge of the Worthington Society. All phases of bird life will be studied, under normal as well as artificial conditions. We may expect some valuable results from this establishment.

Members and readers will be interested to know that Mr. J. Warren Jacobs' collection of the 'Eggs of Native Pennsylvania Birds' is now on exhibition at the St. Louis Worlds Fair. It is installed with the Pennsylvania economic zoological exhibit in the Palace of Agriculture. It contains the eggs of 159 species which have been known to nest within the state, several having been added to the collection since it was exhibited at the Chicago Worlds Fair, eleven years ago. All will be interested to see the collection about which Mr. Jacobs has written so entertainingly.

Ill health has hastened the removal of our Vice-president, Rev. W. L. Dawson, to the Pacific coast. For the present his address will be Blaine, Washington. We trust that the bracing air and salubrious climate of that region may speedily restore him to complete health and vigor.

N. B.—The editor has concluded to issue a sheet of errata with the index, both to appear with the December BULLETIN. He will be grateful for notice of any errors appearing in contributed articles. He will also be grateful for articles and notes intended for the December BULLETIN. Everything intended for the December BULLETIN should reach the editor at his Chicago address not later than November 15.

NOMINATIONS FOR 1905.

Nominations for officers for 1905 are now in order. The list of present officers and members may be found in the March, 1904, BULLETIN. Every member should manifest interest enough in the Club to make full nominations. A postal card is sufficient to contain the required number of names. Address it to Lynds Jones, University of Chicago, Chicago, Ill. If you will give this matter your immediate attention there will be no dearth of nominations.

IMPORTANT NOTICE: There are ready for distribution title pages for the following volumes of THE WILSON BULLETIN: New Series Vols. 3, 4, 5, 7, 8, 10, 11. All who wish these title pages may secure them by giving notice to the editor before the December number is mailed. Unless otherwise directed, all such requests will be met by enclosing the title pages wanted with the December BULLETIN. They will be mailed earlier if a one cent stamp accompanies the request.

NOTES.

BOBOLINKS INCREASING AT BOULDER, COLORADO.

Bobolinks, once supposed to be rare in Colorado, are common in at least three localities in Boulder county this year, and their songs have been much enjoyed by the writer and others. Last year I saw one east of Boulder and Dr. J. R. Brockett reported one on the University campus at Boulder, and the year before Mr.L.C. Bragg took one near town, but this year I have seen about a dozen every day that I have visited one locality. Popularly our Lark Bunting has been oftencalled "Bobolink," though there is no good reason for the confusion, as they are readily distinguished. JUNIUS HENDERSON.

A JANUARY KINGFISHER.

On January 19th of this year I observed a Belted Kingfisher about two miles below this place on the bank of the Hudson river. The mercury stood at 2 degrees below zero and the river was frozen solid from shore to shore.

I also recorded a Sparrow Hawk the same day, but this is not unusual as I have seen several during the past winter.

Ossining, N. Y., May 6, '04. FREDERICK C. HUBEL.

NOTES ON THE NESTING OF THE BLACK TERN.

On June 27, of this year, Mr. Karl Heilmann and the writer found a nest of the Black Tern with three fresh eggs in the Sandusky Bay marshes. The eggs were placed on a few broken fragments of old flags on what seemed to be a pancake of muck. After I had photographed the nest and eggs and put the dripping camera into the boat, I examined the foundation. The pancake of muck rested on some floating vegetation. This in turn was resting on an old sunken muskrat house, probably three or four years old, which had formed a kind of a submarine decayed island. This would indicate that both Langdon as well as Jones and Dawson were right in their respective statements which seem to be at variance; it is the combination of both which gives us the correct fact at least in this one particular instance. New muskrat houses or those a year or so old were not used, though in abundance.

We also saw a pair of Belted Piping Plovers on this date, the nest had probably been destroyed by a recent storm, which had driven the waves of Lake Erie into the bay clear over the sand-dunes of the Cedar Point peninsula. W. F. HENNINGER.

NORTHERN OHIO NOTES.

Roseate Tern, (*Sterna dougalli*,) was found in a company of Common Terns which were flying above Big Chicken island, lake Erie, August 26, 1904. While this island lies in Canada it is so near the border of Ohio that the occurrence of this rare Ohio tern here should not

be allowed to pass unnoticed. The bird was in full breeding dress, and gave evidence by its actions, of belonging to the island. Many of the other birds were in molt, but this specimen gave no evidence of molt.

Black Tern.(*Hydrochelidon nigra surinemansis.*) No birds were to be seen at their regular breeding places in the Sandusky marshes, August 24 to 27, but they were found in numbers at the Chicken islands with the Common Terns, most of them in transition molting plumage. Some had almost completed the molt, while others had scarcely more than begun. A few Black Terns were also found with small companies of Common Terns roosting on the sand spits among the Bass islands.

It may be interesting to note that North Harbor island, which was a favorite breeding place for the Common Terns in 1901, gave little evidence of having been inhabited by more than a handfull of birds the past season. Likewise, Chick island, which was a low reef supporting a considerable growth of Smart-weed (*Polygonum*) and numerous nesting terns in 1901, was reduced to a wave washed reef entirely devoid of either vegetation or tern nests on the day of our visit, August 26. However, roosting terns of both species, Herring and Bonaparte Gulls, were numerous enough to almost completely cover the rocks. The gulls were also in molting plumage.

The lagoon of Middle Bass island, which yielded such rich bird life in 1901, was full to the brim, and surrounded by three feet of water on all sides. Consequently there were no mud flats, and no shore birds. A flock of Shoveller—decoys gave me palpitation of the heart until their true structure was revealed, when three small boys in a boat rowed through their midst. A single Least Bittern made an additional record for the lagoon. Black Terns were also in evidence here. Numerous Pied billed Grebes seemed entirely at home, and probably bred here during the summer, with the King Rails and Florida Gallinules. both of which were feeding everywhere.

The only shore birds recorded among these islands were Sanderlings, Turnstones, Spotted Sandpipers and Killdeers. This was disappointing, in view of the records of others at Oberlin earlier in the month. I have noticed, however,that many of the shore birds seem to prefer inland ponds and mud flats during their southward journey.

LYNDS JONES.

PUBLICATIONS RECEIVED.

Some New Facts About the Migration of Birds. By Wells W. Cooke. Reprint from Yearbook of Department of Agriculture for 1903.

In this interesting paper Professor Cooke discusses anew 'Causes of migration,' 'How do birds find their way,' 'Casualties during migration,' 'Distance of migration,' 'Routes of migration,' 'Relation of migration and temperature,' 'Variations in the speed of migration,' 'The unknown.' A careful review of this paper would involve reproducing much of it. Hence, the reader is referred to the Yearbook, access to which should be easy to all. Every local library should possess a copy, or the reprint may be secured through your congressman. L. J.

Comparison of the Provisional Schemes of the Classification of Birds. By R. W. Shufeldt. Reprinted from the American Naturalist, Vol. 38, No. 448.

In this valuable paper Dr. Shufeldt touches upon the various and varied systems of classification of birds in vogue now in different parts of the world, and rightly relegates our A. O. U. classification to the old Curvierian epoch. He shows that the world over there is no unanimity of opinion and practice in the limitation of the larger groups nor of the characters which should be assigned to the groups above species. He sees no immediate light for a uniform world classification, but concludes that only more exact knowledge of bird structure and general morphology will bring about any material improvement in the situation. Meanwhile we may hope that our A. O. U. committee may be working along broad lines, looking toward this greatly needed world uniformity. L. J.

The Economic Value of the Bob-white. By Sylvester D. Judd, Ph. D. Reprint from Yearbook of Department of Agriculture for 1903.

Dr. Judd proves that Bob-white is not at all destructive to any sort of crops, but does great good in destroying enormous quantities of injurious weed seeds and insects. It possesses distinct æsthetical value in addition to its value as a food. He concludes that it may be encouraged to increase to such numbers that there will always be a surplus in the open seasons, thus permiting legitimate sport for those so inclined, while not endangering other interests. We heartily commend the paper to every person who may have the slightest interest in the bird.

L. J.

The Destruction of Birds by the Elements in 1903-04. Special Report, by Edward Howe Forbush, Wareham, Mass. Ornithologist to the State Board of Agriculture. From the fifty-first annual report of the Massachusetts state board of ag iculture.

This paper is chiefly concerned with the discussion of the effect of the unusually severe winter and the following wet spring upon birds in

general, especially in New England. The author concludes that large numbers of adult birds perished during the winter from lack of food and cold, and that the wet spring was responsible for the death of great numbers of nestling and young birds. Judging from my own studies of the terns and gulls which nest in the vicinity of Woods Hole, Mass., these storms did not materially affect these birds. The author makes a strong plea for the preservation of the birds by providing shelter and food in such severe winters, and employing every possible means for preventing their destruction during unfavorable weather. L. J.

The birds of Erie and Presque Isle, Erie County, Pennsylvania. By W. E. Clyde Todd. Reprinted from Annals of the Carnegie Museum, Vol. II, 1904. Pages 481 to 596, with three plates and one map.

237 species are here given as occuring in this limited area. 17 pages of introduction are concerned with a discussion of the physical features of the region and the grouping of the species treated according their mode of occurence. The copious annotations under each species are chiefly concerned with the occurence of the species in the region, with notes upon its occurence in contiguous regions. Mr. Clyde Todd has here given us a carefully prepared list of a region about which very little has thus far been written. We therefore welcome it as a further contribution to faunal literature. L. J.

Amateur Sportsman, The. Vol. XXXI, Nos. 3, 4, 5.

American Ornithology, Vol. IV, Nos. 7, 8.

Bulletin of the Michigan Ornithological Club. Vol. V, No. 2.

Bird-Lore. Vol. VI. No. 4.

Condor, The. Vol. VI, No. 4.

Maine Sportsman. Vol. XI, Nos. 130, 131, 132.

Naturaliste Canadien, Le. Vol. XXXI, Nos. 5, 6, 7.

Plant World, The. Vol. VII, Nos. 6, 7, 8.

Transactions of the Massachusetts Horticultural Society, for 1903, Part II.

Twentieth Annual Report, 1903, Agricultural Experiment Station University of Wisconsin.

Twenty-third Annual Report, Cincinnati Museum Association, '03.

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"KEARSARGE" BIRDS.

BY E. H. AND H. E. PORTER.

Kearsarge, N. H., is situated in a narrow valley of the White Mountains, having Moat Mountain and the noted White Horse ledges on the west, Mt. Kearsarge on the north, and Rattlesnake Range on the east. Through a "notch" to the northwest, the railroad leads to Fabyans and the higher peaks. Three villages are situated in this valley: Kearsarge, North Conway and Intervale. These villages are all interesting from an ornithological standpoint owing to the very varied country, but at Kearsarge village the birds are mainly those of the woods and fields, almost the only water being the diminutive Kearsarge brook.

Our summer home is some two hundred feet from the road, the intervening space being lawn, on which the Goldfinches and Robins are especially numerous. With the exception of a few acres of hay-fields, the remaining twenty-four acres of land are woods, through which Kearsarge brook runs.

This list was compiled during July, August and a part of September. Barely six *long* hunts were made during that period, the birds seen merely chanced to meet our sight, but we always carried glasses. In the list those species marked * were seen on our own place, those marked † breeding there.

In addition to those species named, the Towhee, Black-throated Blue Warbler and Pileated Woodpecker were heard.

1. **Botaurus lentiginosus.** American Bittern. This species was seen once in July, but several times afterwards. Breeds in the Intervale marshes.

2. **Ardea herodias.** Great Blue Heron. Only once seen, the only

record of this species, as far as can be ascertained, in the valley.

3. **Accipiter velox.** *Sharp-shinned Hawk. Commonest of the hawks.

4. **Accipiter cooperi.** *Cooper Hawk. Semi-occasional.

5. **Buteo borealis.** *Red-tailed Hawk. Fairly common during September.

6. **Buteo lineatus.** *Red-shouldered Hawk. One instance noted.

7. **Falco sparverius.** Am. Sparrow Hawk. Breeds on Peaked Mountain of the Rattlesnake Range.

8. **Ceryle alcyon.** ‡Belted Kingfisher. One within sight or hearing almost constantly.

9. **Dryobates villosus.** *Hairy Woodpecker. Occasional.

10. **Dryobates pubescens medianus.** †Downy Woodpecker. Common in the early summer.

11. **Colaptes auratus luteus.** *Northern Flicker. *Rather rare.*

12. **Antrostomus vociferus.** *Whip-poor-will. One seen.

13. **Chordeiles virginianus.** *Nighthawk. A small flock appeared nearly every evening.

14. **Chætura pelagica.** *Chimney Swift. Common until September 5.

15. **Trochilus colubris.** *Ruby-throated Hummingbird. Uncommon.

16. **Tyrannus tyrannus.** *Kingbird. Common. Breeds at Intervale.

17. **Sayornis phœbe.** *Phœbe. Occasional.

18. **Contopus virens.** Wood Pewee. One instance.

19. **Empidonax flaviventris.** †Yellow-bellied Flycatcher. One family near Kearsarge Brook.

20. **Empidonax minimus.** Least Flycatcher. One seen in August.

21. **Cyanocitta cristata.** *Blue Jay. Infrequent at all times.

22. **Corvus brachyrhynchos.** ‡American Crow. Comparatively few seen until the first part of September.

23. **Molothrus ater.** Cowbird. One recorded from the Enchanted Woods.

24. **Agelaius phoniceus.** Red-winged Blackbird. Breeds between Kearsarge Village and Intervale.

25. **Sturnella magna.** Meadowlark. One individual remained from July 13 to 17, part of the time at Intervale.

26. **Carpodacus purpureus.** †Purple Finch. A frequent visitor to our lawn, but difficult to find when not there.

27. **Astragalinus tristis.** ‡American Goldfinch. Common, especially on the lawns.

28. **Pocœcetes gramineus.** †Vesper Sparrow. Infrequently seen.

29. **Zonotrichia leucophrys.** White-crowned Sparrow. One instance.

30. **Zonotrichia albicollis.** *White-throated Sparrow. Fairly common on the slopes of the mountains.

31. **Spizella socialis.** †Chipping Sparrow. Abundant.

32. **Spizella pusilla.** ‡Field Sparrow. Rather rare.

33. **Junco hyemalis.** †Slate-colored Junco. Abundant.

34. **Melospiza cinerea melodia.** †Song Sparrow. Very common occasionally, at other times surprisingly rare.

35. **Cyanospiza cyanea.** *Indigo Bunting. Common along the roads.

36. **Hirundo erythrogaster.** *Barn Swallow.

37. **Petrochelidon lunifrons.** *Cliff Swallow.

Two more surprisingly infrequently recorded species.

38. **Ampelis cedrorum.** †Cedar Waxwing. Very common.

39. **Lanius borealis.** *Northern Shrike. Once recorded.

40. **Vireo olivaceus.** †Red-eyed Vireo. Commonly seen near the house.

41. **Vireo flavifrons.** *Yellow-throated Vireo. By far the commonest of the Vireos.

42. **Vireo solitarius.** *Blue-headed Vireo. Often seen, especially in September.

43. **Vireo noveboracensis.** *White-eyed Vireo. Once recorded, the only time in the county, as far as can be ascertained.

44. **Mniotilta varia.** *Black-and-white Warbler. Infrequent.

45. **Helminthophila rubricapilla.** *Nashville Warbler. Commoner than the previous species.

46. **Helminthophila peregrina.** *Tennessee Warbler. Twice seen.

47. **Dendroica coronata.** *Myrtle Warbler. Rather common.

48. **Dendroica maculosa.** †Magnolia Warbler. Somewhat more common.

49. **Dendroica blackburniæ.** Blackburnian Warbler. We saw one in very thick woods—a beautiful male. His song was almost precisely that of the Black and White Warbler, and the song was almost all on the same note, contrary to the usual one.

50. **Dendroica virens.** †Black-throated Green Warbler. By far the commonest of the Warblers, and commonest of all Kearsarge birds with the exception of the Chickadees, Robins, Bluebirds, Song Sparrows, Chippies, Crows and Juncos.

51. **Dendroica vigorsii.** *Pine Warbler. Rather rare.

52. **Seiurus aurocapillus.** *Oven-bird. Fairly common.

53. **Geothlypis trichas brachidactyla.** *Northern Yellow-throat. Rare.

54. **Wilsonia canadensis.** Canadian Warbler. Twice seen.

55. **Setophaga ruticilla.** † American Redstart. Common until August 15.

56. **Galeoscoptes carolinensis.** *Catbird. Casual.

57. **Toxostoma rufum.** *Brown Thrasher. Once recorded.

58. **Certhia familiaris americana.** *Brown Creeper. Rare at all times.

59. **Sitta carolinensis.** *White-breasted Nuthatch. Fairly common.

60. **Sitta canadensis.** *Red-breasted Nuthatch. Rarer than the previous species.

61. **Parus atricapillus.** †Chickadee. Common.

62. **Parus hudsonicus.** *Hudsonian Chickadee. Very rare.

63. **Regulus satrapa.** *Golden-crowned Kinglet. Common in September.

64. **Hylocichla mustelina.** †Wood Thrush. Rare.

65. **Hylocichla fuscescens.** *Wilson Thrush. Commoner.

66. **Hylocichla swainsonii.** *Olive-backed Thrush. Once seen.

67. **Hylocichla guttata pallasii.** *Hermit Thrush. Commonest of the thrushes.

68. **Sialia sialis.** *Bluebird. Common.

69. **Passer domesticus.** English Sparrow. Only once seen in Kearsarge village.

In addition to these, nineteen species were recorded from the village by four other bird-lovers, including Warbling Vireo.

The most remarkable facts are the extreme abundance of the Black-throated Green Warbler, the infrequency of all warblers and the absence of the Northern Parula Warbler, Scarlet Tanager, all Grouse and the Yellow-bellied Sapsucker.

AN OCTOBER ALL-DAY AT BLAINE, WASHINGTON.

BY WILLIAM LEON DAWSON.

Of course it was cloudy. That it was so instead of *rainy* was a mark of special favor, received by the Bird-Man with becoming gratitude, for every loyal Puget-Sounder knows that rain has the right of way from October first *on*. The clouds formed a great leaden canopy centering over Blaine, with no visible support by way of tent poles upon either horizon, but with certain airy hangings and draperies at the edges which not even the rising sun could thrust aside. But in his attempt to do so the draperies caught fire, warming from saffron to Saturn red and rolling up from the east in billows of flame which threatened the eternal hills. Mt. Baker, our patron saint and watchful sentinel, situated some fifty miles to the east and south, stood apart from the conflict, but reflected something of the heavenly ardor from its new-fallen snows until the sun found a rift in the curtain of cloud and shot a full glance at the mountain, whereupon it cast a huge shadow athwart the sky, like the umbration of the needle upon the dial. The northeast in glory and the southeast in the shadow of our glorious mountain—it was worth the sacrifice of a few early birds to have seen it!

The first half hour of indecision, from six o'clock on, was spent awheel, ranging the sidewalks of the still silent town, gleaning the bird-notes from orchard and garden and unreclaimed ravine. The writer was just congratulating himself upon the abundance of native birds hereabouts, undisturbed

as yet by the presence of the all but universal scourge, when "*Yark, yark, scrape, chirp, chirp*" came from a little fir-tree a block away, in the center of the central business block of town. His obscene majesty, the English Sparrow, has arrived! His half century of conquest is appropriately consummated upon this last square rood of Uncle Sam's undivided possession. Blaine stands at the exact northwestern corner of the United States, and the goal of the Gamin is reached.

The aliens can be very crafty if they choose, and they do choose while they are in the minority. I have searched the townsite over, during the two months past, fearing the dread presence, yet resolved to know the worst, without having heard a single chirp from the *domesticus* until to-day. Yet I am assured that the creatures have been here in small numbers for two or three years past. Nine Sparrows were frightened, upon this occasion, from the little fir-tree, and all became instantly silent upon their escape.

The cataloguer's attention was next directed toward the water birds. Drayton Harbor, which is the inner sea sanctum of Blaine, is some seven miles in circumference at high-tide, and save for a narrow channel, is shut off from the wide waters of Semiahmoo Bay by a sand-spit a mile in length. As flood-tide approaches, the number of sea birds upon the harbor is augmented to several thousand by the arrival of ducks, mostly Scaups, "Bluebills," and Scoters, or "Black Ducks." These birds, upon entering or leaving the harbor, usually fly low over the sand-spit and are here assaulted by a battery of ever-ready guns. As a result of the steady maintainance of the firing line, the ducks upon the harbor are nervous and unapproachable—save by eight-power binoculars.

The constant residents of the harbor are Grebes. Western Grebes (*occidentalis*), to the number of a hundred or more, move about singly or in small groups, occasionally calling to each other in shrill notes, like the squeaking of rusty windlasses. They are graceful creatures—cruelly graceful with their dagger beaks and eyes of fiery red—and yet there is something swan-like in the carriage of the head upon the mobile neck.

Holboell Grebes (*Colymbus holboellii*), appear in lesser

numbers and are less conspicuous by reason of their compact build and blended colors.

Horned Grebes (*Colymbus auritus*), abound. As a rule they frequent the shallows, where escape by diving is not always convenient; but, unlike their congeners, they take to wing with great readiness. At times they will fly back and forth upon the merest whim, or for exercise.

The presence of a school of smelt or herring will attract all the Grebes at once. On this all-day trip the writer drew near a busy company of several hundred birds, and when they took flight the pattering of tiny feet and the dipping wing-tips was like the fall of a small cloud-burst upon the water.

Gulls, at high-tide, are like street car conductors off duty. There is nothing for them to do but to haunt unavailingly the scenes of their former activity, or to gather in languid companies and discuss the prospects of the next shift. At such times they are glad to find log-booms or floats to rest upon; but in the absence of these (as at present in Drayton Harbor) they sit upon the water or drift about on pieces of mill waste, or else desert the harbor altogether.

Bonaparte Gulls (*Larus philadelphia*), which have swarmed to the number of thousands for six weeks past, are now represented by a few stragglers, wounded birds and their faithful mates; while Ring-billed Gulls (*Larus delawarensis*) have become common, and California Gulls (*Larus californicus*) are slowly increasing in numbers.

The Terns, Arctic (?) and Common (*Sterna paradisæa* and *hirundo*) have disappeared, and after them has apparently followed their arch-persecutor, the Parasitic Jaeger (*Stercorarius parasiticus*), a specimen of which I shot from "the spit" on September 30th.

In contrast with all this was the trip into the interior, made in the afternoon. The gray cloud-cap still hung over everything, but it included within its dome distant Baker, whose uplifting presence made one feel that his world was good enough, however circumscribed.

Mile after mile was done off over gravel pikes, past stump-scarred clearings, tiny orchards and deserted townsites, through somber forests of fir and hemlock, and through wildernesses of second growth, alders, willows and evergreens.

But the bird-world was oppressed by the cloud-cap. It had had its breakfast, and, since there was not light enough to encourage thoughts of supper, it betook itself early to bed. There was little to be heard except the *tick, tick, tick* of the Western Winter Wren (*Olbiorchilus hiemalis pacificus*) and the drowsy *tss, tss; tss tsee* of the Western Golden-crowned Kinglet (*Regulus satrapa olivaceus*).

At 3 p. m., as I stood upon a little bridge over a ravine choked full with a jungle of vine maple, goooseberry bushes, devil's club, and ferns, an incautious chickadee, grumbling over its hard piliow, led the Bird-Man to attempt the chickadee call. (The notes of these Oregon Chickadees, *Parus atricapillus occidentalis*, have a slightly different pitch from those of *Parus atricapillus*, and I have not quite mastered them yet). As a result, the bushes began to yield up sleepy Chickadees. Western Golden-crowned Kinglets emerged unexpectedly from snug sleeping-bags hidden in the vegetation under my feet. The Northwest Bewick Wren (*Thryomanes bewickii calophonus*) scolded, W. W. W. (which is note-book shorthand for Western Winter Wren) ticked apprehensively, and the fruitful bush began to yield a tribute of Ruby-crowned Kinglets, aroused from deeper slumbers, but cheerful and forgiving still. It remained only for the *Maior domo*, which in these parts is the Oregon Towhee (*Pipilo maculatus oregonus*), to peep out and through the curtains to see that the children were not taking harm, and then the disturber of midnight peace, at 3:00 p. m., withdrew "in good order."

But even after this disheartening adventure, Fortune perched upon the Bird-Man's banner in the shape of a California Pygmy Owl (*Glaucidium gnoma californicum*). This pocket edition of the powers that prey stood out boldly upon the topmost splinter of a wayside stub and challenged scrutiny. The gnoma gave his back to the road, but every now and then turned a careful eye upon the stranger. Then all at once the bird whirled backward and launched himself like a bolt across the road, at a mouse some sixty feet away. Seizing the "wee, timerous, cowerin' beastie" at the very entrance of its hole, the bird maintained its grasp with both feet and supported itself by wings outstretched upon the ground. Not until the squeakings of the victim had quite ceased, did the captor rise

and disappear by rapid flight into the wood.

There are always a few staple species which try the patience of the ardent horizonist by deserting on the "All-Day." Formerly they have been the most inevitable of birds afield, but now, forsooth, they must lurk in hiding with the most cunning intent to defeat the ends of science. Among such that I would hold up on this occasion to well deserved scorn, are Kingfisher (*Ceryle alcyon*), (think of it!), Audubon Warbler (*Dendroica auduboni*), and Herring Gull (*Larus argentatus*). Others which might have been gracious are Mongolian Pheasant (*Phasianus torquatus*), Northern Pileated Woodpecker (*Ceophlœus pileatus abieticola*), Harris Woodpecker (*Dryobates villosus harrisii*), and California Creeper (*Certhia familiaris occidentalis*). With these additions I feel that the "All-Day" would have been fairly representative of the vicinity of Blaine at this season.

Horizons, Blaine and vicinity, October 13, 1904, 5. a. m. to 5 p. m.:

BLAINE, 5:00 TO 8:00 A. M.

Rusty Song Sparrow.—*Melospiza cinerea morphna.*
Northwest Crow.—*Corvus caurinus.*
Northwest Bewick Wren.—*Thryomanes bewickii calophonus.*
Western Meadowlark.—*Sturnella magna neglecta.*
Western Robin.—*Merula migratoria propinqua.*
California (?) Finch.—*Carpodacus purpureus californicus.*
Oregon Junco.—*Junco hyemalis oregonus.*
Western Golden-crowned Kinglet.—*Regulus satrapa olivaceus.*
Western Winter Wren.—*Olbiorchilus hiemalis pacificus.*
English Sparrow.—*Passer domesticus.*
American Pipit.—*Anthus pensilvanicus.*
Oregon Towhee.—*Pipilo maculatus oregonus.*

DRAYTON HARBOR, 8:00 TO 10:00 A. M.

Horned Grebe.—*Colymbus auritus.*
Western Grebe.—*Echmophorus occidentalis.*
White-winged Scoter.—*Oidemia deglandi.*
Greater Scaup Duck.—*Aythya marila.*
Lesser Scaup Duck.—*Aythya affinis.*
Bonaparte Gull.—*Larus philadelphia.*
Holbœll Grebe.—*Colymbus holbœllii.*
Western Gull.—*Larus occidentalis.*
Surf Scoter.—*Oidemia perspicillata.*
Marbled Murrelet.—*Brachyramphus marmoratus.*
Glaucus-winged Gull.—*Larus glaucescens.*

Ruddy Duck.—*Erismatura jamaicensis.*
Red-breasted Merganser.—*Merganser serrator.*
Loon.—*Gavia imber.*

Semiahmoo Point (The Sand Spit), 10:00 to 12:00 A. M.
Western Bluebird.—*Sialia mexicana occidentalis.*
Nuttall Sparrow.—*Zonotrichia leucophrys nuttalli.*
Northwest Flicker. *Colaptes cafer saturatior.*
Sandwich Sparrow.—*Ammodramus sandwichensis alaudinus.*
Ring-billed Gull. *Larus delawarensis.*

Blaine Beach, 12 M.
California Gull. *Larus californicus.*
Northwest Coast Heron. *Ardea herodias fannini.*

Blaine-Linden Road, 1:30 to 4:00 P. M.
Steller Jay. *Cyanocitta stelleri.*
Oregon Ruffed Grouse. *Bonasa umbellus sabini.*
Oregon Chickadee.—*Parus atricapillus occidentalis.*
Pine Siskin.—*Spinus pinus.*
Ruby-crowned Kinglet. *Regulus calendula.*
California Pygmy Owl. *Glaucidium gnoma californicum.*
Gairdner Woodpecker,—*Dryobates pubescens gairdneri.*

A SUMMER PORCH LIST, AT HINSDALE, ILL.

BY ESTHER CRAIGMILE.

It was almost discouraging to look forward to a summer without bird tramps, but that was the outlook from the end of June to the middle of August, 1904. But there is something to be seen and heard, even from one's own door, if eyes and ears have been trained. The location was a few miles west of Chicago, half a mile distant from Flag creek. To the east, west and north, rolled the fertile prairies, while a wood of small trees stretched to the south, bordering the creek until it reached the Des Plaines river, four miles distant.

A dense thicket, several rods in length, grew along the roadside, furnishing food and shelter for not a few birds. Song Sparrows, Chippies, Catbirds, Thrashers, Chewinks, Cowbirds, and Indigo Buntings were always in evidence there. Numbers of water birds were to be seen mornings and evenings, going to and from their feeding grounds.

Previous to this year the fields have been alive with hundreds of Dickcissels. No nests were found this summer,

and their notes were only heard twice on two successive days late in June. "What has become of Dick?" was a common question among bird friends.

The Yellow Warbler has always been abundant until this year. Not one was seen or heard, so the Song Sparrows were alone responsible for the young Cowbirds. It was not an uncommon sight to see a huge young Cowbird pursuing a Song Sparrow along the wire fence, refusing to be hushed until it had been gorged with food.

It seemed a little strange to miss both these birds this summer. Heretofore their presence has been more marked than any other variety on this list.

The most unique experience of the summer was a morning serenade. All the Bartramian Sandpipers of the creek bottom must have been present. It was barely three o'clock, and their weird, wind-like whistles sounded like music from another planet.

The Nighthawks did not appear until the middle of August, and then in migration for the most part. One bright midday a flock of one hundred were seen flying south at considerable height. Near this same spot two years ago, late in August, I counted six hundred Nighthawks in a space of fifteen minutes. It was about six o'clock in the evening, and the air was just alive with them. The area in which I counted was not more than a quarter of a mile in width, and it was impossible to estimate the actual size of the wave. It was a continuous passage—there was no looking back on their part—and standing in an open tract in the woods, I was able to count those in my range with some degree of accuracy.

Here is the summer list in the order in which they were seen or heard:

1. Bartramian Sandpiper.
2. Indigo Bunting.
3. Dickcissel.
4. Song Sparrow.
5. Vesper Sparrow.
6. Grasshopper Sparrow.
7. Goldfinch.
8. Wood Pewee.
9. American Bittern.
10. Red-winged Blackbird.
11. Crow.
12. Blue Jay.
13. Barn Swallow.
14. Chimney Swift.
15. Kingbird.
16. Bob-white.
17. Flicker.
18. Catbird.
19. Brown Thrasher.
20. Red-headed Woodpecker.

21. Cowbird.
22. Bobolink.
23. Mourning Dove.
24. Meadowlark.
25. Yellow-billed Cuckoo.
26. Robin.
27. Bluebird.
28. Field Sparrow.
29. Marsh Hawk.
30. Prairie Horned Lark.
31. Purple Martin.
32. Baltimore Oriole.
33. Red-eyed Vireo.
34. Rough-winged Swallow.
35. Northern Yellow-throat.
36. Screech Owl.
37. Great Blue Heron.
38. Black-crowned Night Heron.
39. Migrant Shrike.
40. Hairy Woodpecker.
41. Downy Woodpecker.
42. Chickadee.
43. Bronzed Grackle.
44. Chewink: Towhee,
45. Scarlet Tanager.
46. American Sparrow Hawk.
47. Pigeon Hawk.
48. Nighthawk.
49. Semipalmated Plover.

SOME OBSERVATIONS ON A CAPTIVE RED-TAILED HAWK (*Buteo borealis*).

BY W. F. HENNINGER.

On August 15th of this year a Red-tailed Hawk was brought to me, that had been shot in the wing while pouncing down on a chicken in a barn-yard. Just a few days before that another had been shot at at the same place, while with a chicken in his talons he was trying to get to an orchard. On August 31st I saw one pursuing a Red Squirrel. This goes to confirm my statement made elsewhere (Wilson Bulletin, December, 1902, p. 138) that the Red-tailed Hawk feeds principally on birds and squirrels. The wounded Hawk brought me is not an adult and I concluded to experiment with my captive to find out just what he would eat. After refusing food for three days he began to eat. So far he has eaten beef, raw, boiled and roasted; also raw and boiled pork, kidney and liver. He would not touch cured meats; nor will he eat veal, except forced by hunger. A Barn Owl, which I had in captivity for a week in 1898, would also refuse veal. He always liked squirrel, whenever offered him. On September 1st I gave him two Yellow-legs and two Field Sparrows, and although he had just been fed with some raw beef, immediately devoured them with great greed; in fact, he would always jump down from his perch and with great ferocity go for birds

at once. He always began with the head, picking it clean, and then tearing it off with his bill would crush it at once and devour it, after which the rest of the bird would follow. He always preferred birds to anything else. The second week in September a Sora was brought to me. This I let lie for three days, till, in the heat, it had begun to decay and smelled very badly. After he had literally stuffed himself with raw meat, about one pound, I threw this decayed Sora in his cage. He went at it at once and ate it in about five minutes. This, in my opinion, does not merely show that the Red-tailed Hawk will eat carrion, and most any bird of prey, when hungry, will do that, but, as he certainly was not hungry at the time, that Red-tails prefer birds to other food. Again, I do not like to make a statement to this effect, as there is so much evidence to the contrary (compare: Hawks and Owls, by A. K. Fisher,———), but it certainly agrees with my observations in Pike and Scioto Counties, as well as my field observations in Seneca County. On September 29th I put a large dead rat in his cage. He looked at it for about ten minutes before touching it, and I hadn't fed him for two days at that. Then he ate the head and the inside, leaving the skin, hind legs and tail intact, and would not eat this till the next day, though I did not feed him anything else. This certainly does not show a great fondness for rats and mice. He never went at them with the greed he showed for squirrels and birds. On October 21 and 22 I fed him raw and fried fish, which he ate immediately. So far I have never been able to get him a snake or frogs, but if I can keep him over the winter will try him on these next spring. Thus I cannot consider the Red-tail as harmless as other ornithologists do, yet would not agree with the majority of sportsmen in calling him a harmful species, as killing of squirrels is not a detriment, but a beneficial service. From a utilitarian standpoint, I can only hope for the extermination of the squirrels, especially the Red Squirrel, though not from an aesthetic or sentimental standpoint.

THE NEW YEAR CENSUS.

Not long after this number reaches its readers a new year will be at hand. If you are keeping a yearly record of the birds, your old note-book will be laid aside and a fresh one placed in readiness. It means something æsthetically, if not practically, how the new note-book is begun, whether the first page is well filled or not. To me it means more than I care to admit. We have begun these New Year Censuses well, and I hope and trust that 1905 will not fall behind 1904 in the records that shall be made. 1905 begins on Sunday, and it is therefore proposed that for those who do not study birds on that day, to make the record on the 2nd. How much each one can do will depend upon the region, the time, and the weather. The editor will be unable to participate in this contest, so the prize offered last year cannot be repeated. To every one who secures a bona fide list of twenty-five or more species, not including English Sparrow, a year's subscription to THE WILSON BULLETIN will be given. Make as large a list as possible for Mr. Frank M. Chapman's Christmas Census, and then beat it for the New Year Census! Send the lists to Lynds Jones, 5623 Drexel Avenue, Chicago, Ill.

BREWSTER WARBLER (*Helminthophila leucobronchialis*) IN CHESTER COUNTY, PENNSYLVANIA.

Near the close of an "all-day with the birds" I was fortunate enough to meet with a single individual of this type, phase, or whatever it may be, near Devon, on May 13th, 1904. It was found at the border of a large grove, where I watched it sometimes as near as twenty feet, from an old cart-road. It was altogether like the Blue-winged Warbler above, with the white wing bars and black bar through the eye—but the under parts were white instead of the rich yellow of that bird. I could detect no trace of yellow on its breast. In action, dropping from branch to branch of the smaller trees so near, it was very like the Blue-wing—with which I am familiar. Although I cannot but regret that I had no means of securing it at the time, I have no hesitation in recording it as a Brewster's Warbler, after I had observed it through a good pair of field glasses for over fifteen minutes. FRANK L. BURNS, Berwyn, Pa.

BREWSTER WARBLER AGAIN IN OHIO.

(*Helminthophila leucobronchialis*)

BY W. F. HENNINGER.

On September 17th of this year while out to study the annual fall

migration in a very favorable woods 1½ miles southeast of Tiffin we were able to add several species to the county list. Of warblers 18 species were seen, among them a Brewster Warbler. While kneeling down watching a Black and White Warbler catching a moth, I suddenly spied in a low sapling a warbler that at the first glance I recognized as a new species.

The upper parts were bluish gray with a black streak through the eye, lower parts yellowish shading into white on forepart of breast, throat and chin, two small yellowish wing bands, yellowish crown patch hardly discernible, the whole plumage overlaid with a kind of greenish cast as if some one had breathed over it. The bird was observed for about 8 or 9 minutes, was very agile, but uttered no sound, not even the usual migration "chip" of other warblers. The bird was perhaps not quite typical but it was a Brewster nevertheless and to my knowledge the first fall record for this species in the state, and I was only sorry I had left my gun at home.

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EDITORIAL.

Readers will be pleased to know that the Collection of Mr. J. Warren Jacobs which was displayed at the St. Louis Fair and mentioned in the last Bulletin, received from the committee on awards a gold medal as a just recognition of the expense of time and money as well as the discrimination which Mr. Jacobs has put upon his unusually complete collection.

The local papers of Chardon, Ohio, report a flight of some 500 Passenger Pigeons at that place on October 22. It is unfortunate that this report was not confirmed in a manner above question. The presence of so many of these once abundant birds is difficult to account for. No breeding place of any such extent as this would indicate are known, if, indeed, any at all are known. Numerous reports of considerable numbers in the Northwest, in South America, and even in foreign countries where they never lived, have proved to be myths.

Mr. Frank L. Burns, of Berwyn, Pa., has kindly consented to assist the editor in collecting copy for the March Bulletin. Matter intended for publication in that number should reach Mr. Burns before February 15.

The editor will be at 5623 Drexel Ave., Chicago, Ill., until July, 1905. Requests for back numbers of the Bulletin, or notices that the current number has not been received should be addressed to Mrs. Lynds Jones, 160 North Professor St., Oberlin, Ohio, to insure prompt attention.

We want to inaugurate a campaign for increasing our membership the coming year, to twice its present size. This can be done if every member will either induce some friend to become a member, or send to any one of the officers a list of names of persons who are interested in birds. Will not every member make this a personal matter? Increased membership means a better grade of work, and a better Bulletin.

ELECTION OF NEW MEMBERS.

The following persons are presented for membership:

FOR ACTIVE MEMBERSHIP.

P. A. Taverner, Detroit, Mich.; Carl Fritz Henning, Boone, Iowa; Frederick B. McKechnie, Ponkapog, Mass.

FOR ASSOCIATE MEMBERSHIP:

Miss Clara S. Wheatley, Medina, Ohio.

ELECTION OF OFFICERS FOR 1905.

The election of officers has resulted as follows:

President—Lynds Jones, Oberlin, Ohio.

Vice-President—W. L. Dawson, Blaine, Wash.

Secretary—John W. Daniel, Jr., Washington, D. C.

Treasurer—Frank L. Burns, Berwyn, Penn.

Executive Council. H. C. Oberholser, John H. Sage, A. W. Blain, Jr.

It is in order to send your annual membership dues to the treasurer to the address given above.

Matter intended for the March Bulletin may be sent to Mr. Frank L. Burns, Berwyn, Pa., or to the editor at 5623 Drexel Ave., Chicago, Ill.

NOTES.

NOTES FROM SANDUSKY, OHIO. Mr. Webster Ransom reports a Sycamore Warble, (*Dendroica dominica albilora*) on April 24.

I have secured two specimens of Red-legged Black Duck (*Anas obscura rubripes*) this spring.

Two specimens of Widgeon (*Mareca penelope*) were mounted by John Herb this spring.

James Galloway informs me that about twenty years ago James Dildyne shot six King Eiders (*Somateria spectabilis*) at one shot.

Miss Edith Dixon, of Milan, reports a Blue Grosbeak (*Guiraca caerulea*) at that place, well identified, but the specimen was not secured.

William Harting caught an uninjured Horned Grebe (*Colymbus auritus*) asleep, on Sandusky Bay near Cedar Point, on April 13. The bird was brought home and fed, and on April 16, was taken to the bay and released. It was caught twice during the day. It seemed to have no fear of him.

The specimen of Jaeger shot at Sandusky October 10, 1889, and reported in Cook's Birds of Michigan, page 27 and requoted in Jones' Birds of Ohio, page 26 proves to be a Parasitic Jaeger (*Stercorarius parasiticus*).

Webster Ransom reports a parrot that frequented his orchard, six miles south of Sandusky, in the summer of 1903. It resembled a Carolina Paroquet (*Conurus carolinensis*).

E. L. MOSELEY, Sandusky, Ohio.

PUBLICATIONS RECEIVED.

A Preliminary Review of the Birds of Nebraska, with synopses. By Lawrence Bruner, Robert H. Wolcott, Myron H. Swenk.

While this long promised "Birds of Nebraska" comes to us as a "Preliminary Review," and therefore much different in character from what one might be led to expect, seems to be well adapted to its avowed purpose, "A Working List." While it is preliminary in character, the claim of the authors that it "is believed to represent exactly the state of our knowledge at the present day," seems to be borne out by an examination of the list of species and annotations. The book is really a series of artificial keys, each key followed by an annotated list of the species covered by that key. The keys are intended for work with the specimen in hand, and to the writer's mind, will prove somewhat difficult to those unfamiliar with this method of identification. They belong to the older, rather than the newer system. However, properly used, they will identify. There is a complete index, but we miss a summary of any sort. Such a summary as we find in "The Birds of Colorado," would be a valuable addition. The book is bound in cloth and makes a very welcome and valuable addition to faunal literature.

L. J.

North American Fauna. No. 23. November 24, 1904. A Biological Reconnaisance of the Base of the Alaska Peninsula. By Wilfred H. Osgood.

In this paper of 86 pages, including index, we are given a glimpse of the physical features of the region treated in two maps and eleven half-tones, and in the word pictures which occupy a prominent part of the introduction. Some 43 mammals are given as occurring in the region, and 137 birds are listed. In compiling the lists, previous work is drawn upon It is of interest to note that the bird list contains no new species or sub species. One born to such work cannot avoid a feeling of slight envy of those who are fortunate enough to get out into such remote and interesting fields while he congratulates the author upon his good work.

L. J.

A Discussion of the Origin of Bird Migration. By P. A. Travener. From The Auk, Vol. XXI, No. 3, July, 1904, pp. 322-333.

The author discusses the whole question of migration, but strongly emphasizes one point in previous discussions which has remained obscure. It is that the necessity for the northward movement was at first brought about (and the same necessity continues to the present time) by the fact that during the winter the tropics contain all the bird life they can support without the enormous increased demand for food which would result from the appearance of nestfulls of young. The southward movement began because returning cold destroyed the food north. Of course the laws of adaptation and the survival of the fittest must be brought in to complete the argument. The paper is a valuable one in bringing into prominence a factor which must have exerted a determining influence at the beginnings of this vast movement.

L. J.

Amateur Sportsman, Vol. XXXI, Nos. 6, 7, 8.
American Ornithology, Vol. IV, Nos. 9, 10, 11, 12.
Bird-Lore, Vol. VI, Nos. 5, 6.
Boys and Girls, Vol. II, No. 4; Vol. III, Nos. 1, 2, 3.
Bulletin of the Michigan Ornithological Club, Vol. V, No. 3.
Bulletin 153, Ohio Agricultural Experiment Station.
Bulletin 3, Ohio Department of Agriculture.
By The Wayside, Vol VII, No. 4.
Condor, The, Vol. VI, Nos. 5, and 6.
Maine Sportsman, Vol. XII, Nos. 134, 135.
Monthly Bulletin, The, Vol. II, Nos. 6, 7.
Naturaliste Canadien, Le, Vol. XXXI, Nos. 9, 10, 11.
Ohio Naturalist, The, Vol. V, No. 1.
Oologist, The, Vol. XXI, No. 10.
Ornithologische Monatschrift, Vol. XXIX, Nos. 9, 10.
Plant World, The, Vol. VII, Nos. 9, 10, 11.

On a Collection of Birds and Mammals from Mount Sanhedrin, California. By Witmer Stone. From Proceedings of The Academy of Nat. Sci. of Philadelphia, July, 1904.

ERRATA.

Page 13, line 8, for "autumn" read "summer."
Page 19, line 32, " "1904" read "1903."
Page 35, line 10, " "*holbellii*" read "*holboellii*."
Page 33, line 20, " "*Synthliborhamphus*" read "*Synthliboramphus*."
Page 36, line 23, " "*oergonus*" read "*oregonus*."
Page 36, line 27, " "*itaca*" read "*iliaca*."
Page 94, line 31, " "permiting" read "permitting."
Page 95, lines 16, 17, 18, for "occurence" read "occurrence."

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